```
=> b hcaplus
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         7.05      66.08

FILE 'HCAPLUS' ENTERED AT 10:01:20 ON 02 FEB 2004
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FILE COVERS 1907 - 2 Feb 2004  VOL 140 ISS 6
FILE LAST UPDATED: 1 Feb 2004  (20040201/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d que l13
L11          588 SEA FILE=HCAPLUS ABB=ON  PLU=ON  JELLYFISH?/OBI OR STOMOLOPHUS/
                 OBI
L12        63280 SEA FILE=HCAPLUS ABB=ON  PLU=ON  COLLAGEN?/OBI OR PROCOLLAGEN?/
                 OBI
L13           27 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L11 AND L12


=> d que l14
L11          588 SEA FILE=HCAPLUS ABB=ON  PLU=ON  JELLYFISH?/OBI OR STOMOLOPHUS/
                 OBI
L12        63280 SEA FILE=HCAPLUS ABB=ON  PLU=ON  COLLAGEN?/OBI OR PROCOLLAGEN?/
                 OBI
L13           27 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L11 AND L12
L14            0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ARTHRIT?/OBI AND L13


=> d que l15
L11          588 SEA FILE=HCAPLUS ABB=ON  PLU=ON  JELLYFISH?/OBI OR STOMOLOPHUS/
                 OBI
L12        63280 SEA FILE=HCAPLUS ABB=ON  PLU=ON  COLLAGEN?/OBI OR PROCOLLAGEN?/
                 OBI
L13           27 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L11 AND L12
L15            2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  IMMUN?/OBI AND L13


=> b medline
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COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION
FULL ESTIMATED COST | 4.72 | 70.80

FILE 'MEDLINE' ENTERED AT 10:02:34 ON 02 FEB 2004

FILE LAST UPDATED: 31 JAN 2004 (20040131/UP). FILE COVERS 1958 TO DATE.

On December 14, 2003, the 2004 MeSH terms were loaded. See HELP RLOAD for details.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2004 vocabulary. See http://www.nlm.nih.gov/mesh/ and http:\\www.nih.gov/pubs/yechbull/nd03/nd03_mesh.html for a description on changes.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> d que l18
L16         655 SEA FILE=MEDLINE ABB=ON  PLU=ON  JELLYFISH? OR STOMOLOPHUS
L17      111029 SEA FILE=MEDLINE ABB=ON  PLU=ON  COLLAGEN? OR PROCOLLAGEN?
L18          12 SEA FILE=MEDLINE ABB=ON  PLU=ON  L16 AND L17

=> d que l19
L16         655 SEA FILE=MEDLINE ABB=ON  PLU=ON  JELLYFISH? OR STOMOLOPHUS
L17      111029 SEA FILE=MEDLINE ABB=ON  PLU=ON  COLLAGEN? OR PROCOLLAGEN?
L18          12 SEA FILE=MEDLINE ABB=ON  PLU=ON  L16 AND L17
L19           0 SEA FILE=MEDLINE ABB=ON  PLU=ON  ARTHRIT? AND L18

=> d que l20
L16         655 SEA FILE=MEDLINE ABB=ON  PLU=ON  JELLYFISH? OR STOMOLOPHUS
L17      111029 SEA FILE=MEDLINE ABB=ON  PLU=ON  COLLAGEN? OR PROCOLLAGEN?
L18          12 SEA FILE=MEDLINE ABB=ON  PLU=ON  L16 AND L17
L20           1 SEA FILE=MEDLINE ABB=ON  PLU=ON  IMMUN? AND L18

=> b biosis
COST IN U.S. DOLLARS                    SINCE FILE ENTRY    TOTAL SESSION
FULL ESTIMATED COST                              0.38            71.18

FILE 'BIOSIS' ENTERED AT 10:03:06 ON 02 FEB 2004
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 28 January 2004 (20040128/ED)

FILE RELOADED: 19 October 2003.

=> d que l23
L21         1279 SEA FILE=BIOSIS ABB=ON  PLU=ON  JELLYFISH? OR STOMOLOPHUS
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L22      112175 SEA FILE=BIOSIS ABB=ON  PLU=ON  COLLAGEN? OR PROCOLLAGEN?
L23          22 SEA FILE=BIOSIS ABB=ON  PLU=ON  L21 AND L22


=> d que l24
L21        1279 SEA FILE=BIOSIS ABB=ON  PLU=ON  JELLYFISH? OR STOMOLOPHUS
L22      112175 SEA FILE=BIOSIS ABB=ON  PLU=ON  COLLAGEN? OR PROCOLLAGEN?
L23          22 SEA FILE=BIOSIS ABB=ON  PLU=ON  L21 AND L22
L24           1 SEA FILE=BIOSIS ABB=ON  PLU=ON  ARTHRIT? AND L23


=> d que l25
L21        1279 SEA FILE=BIOSIS ABB=ON  PLU=ON  JELLYFISH? OR STOMOLOPHUS
L22      112175 SEA FILE=BIOSIS ABB=ON  PLU=ON  COLLAGEN? OR PROCOLLAGEN?
L23          22 SEA FILE=BIOSIS ABB=ON  PLU=ON  L21 AND L22
L25           2 SEA FILE=BIOSIS ABB=ON  PLU=ON  IMMUN? AND L23


=> b ocean
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                 ENTRY    SESSION
FULL ESTIMATED COST                               0.85      72.03

FILE 'OCEAN' ENTERED AT 10:03:26 ON 02 FEB 2004
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FILE COVERS 1964 TO 16 JAN 2004 (20040116/ED)

=> d que l28
L26          395 SEA FILE=OCEAN ABB=ON  PLU=ON  JELLYFISH? OR STOMOLOPHUS
L27          340 SEA FILE=OCEAN ABB=ON  PLU=ON  COLLAGEN? OR PROCOLLAGEN?
L28            6 SEA FILE=OCEAN ABB=ON  PLU=ON  L26 AND L27


=> d que l29
L26          395 SEA FILE=OCEAN ABB=ON  PLU=ON  JELLYFISH? OR STOMOLOPHUS
L27          340 SEA FILE=OCEAN ABB=ON  PLU=ON  COLLAGEN? OR PROCOLLAGEN?
L28            6 SEA FILE=OCEAN ABB=ON  PLU=ON  L26 AND L27
L29            0 SEA FILE=OCEAN ABB=ON  PLU=ON  ARTHRIT? AND L28


=> d que l30
L26          395 SEA FILE=OCEAN ABB=ON  PLU=ON  JELLYFISH? OR STOMOLOPHUS
L27          340 SEA FILE=OCEAN ABB=ON  PLU=ON  COLLAGEN? OR PROCOLLAGEN?
L28            6 SEA FILE=OCEAN ABB=ON  PLU=ON  L26 AND L27
L30            1 SEA FILE=OCEAN ABB=ON  PLU=ON  IMMUN? AND L28


=> dup rem l18 l23 l28 l13
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                 ENTRY    SESSION
FULL ESTIMATED COST                               2.20      74.23

FILE 'MEDLINE' ENTERED AT 10:04:24 ON 02 FEB 2004

FILE 'BIOSIS' ENTERED AT 10:04:24 ON 02 FEB 2004
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FILE 'OCEAN' ENTERED AT 10:04:24 ON 02 FEB 2004
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FILE 'HCAPLUS' ENTERED AT 10:04:24 ON 02 FEB 2004
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COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)
PROCESSING COMPLETED FOR L18
PROCESSING COMPLETED FOR L23
PROCESSING COMPLETED FOR L28
PROCESSING COMPLETED FOR L13
L32 41 DUP REM L18 L23 L28 L13 (26 DUPLICATES REMOVED)

=> d ibib abs hitind l32 1-41

L32 ANSWER 1 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:3559 HCAPLUS
DOCUMENT NUMBER: 140:65080
TITLE: Support with **collagen** base for tissue engineering and manufacture of biomaterials
INVENTOR(S): Andre, Valerie; Abdul, Malak Nabil; Huc, Alain
PATENT ASSIGNEE(S): Coletica, Fr.
SOURCE: U.S. Pat. Appl. Publ., 18 pp., Cont.-in-part of U.S. Ser. No. 616,282.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004002055	A1	20040101	US 2003-364223	20030210
FR 2809412	A1	20011130	FR 2000-6748	20000526
US 6541023	B1	20030401	US 2000-616282	20000714
WO 2001091821	A1	20011206	WO 2001-FR1631	20010525
W: DE, JP, KR, US				
DE 10196234	T	20030417	DE 2001-10196234	20010525
JP 2003534102	T2	20031118	JP 2001-587833	20010525
FR 2809314	A1	20011130	FR 2001-6919	20010528

PRIORITY APPLN. INFO.:
FR 2000-6743 A 20000526
FR 2000-6748 A 20000526
US 2000-616282 A2 20000714
US 2000-616526 A2 20000714

AB The invention relates to a method of in vitro testing of the efficacy of a potentially active substance comprising monitoring the effect of said potentially active substance on an artificial skin, comprising a composite product forming a collagen support comprising at least one porous collagen layer covered on at least one side with a collagen membrane component selected from the group consisting of a collagen membrane prepared by compression of a collagen sponge at a pressure of at least about 50 bar and of a collagen membrane comprising a collagen film prepared by drying a collagen gel sep. from the porous collagen layer, thereby providing a reliable method for finding new potentially active substances.

Searched by P. Ruppel

IC ICM C12Q001-00
NCL 435004000
CC 63-3 (Pharmaceuticals)
Section cross-reference(s): 1, 2, 15
ST **collagen** support artificial skin tissue engineering
IT Skin
(Langerhans' cell; support with **collagen** base for tissue engineering and manufacture of biomaterials)
IT Skin
(Merkel cell; support with **collagen** base for tissue engineering and manufacture of biomaterials)
IT Skin
(artificial; support with **collagen** base for tissue engineering and manufacture of biomaterials)
IT Fish
(**collagen** gels from skin of; support with **collagen** base for tissue engineering and manufacture of biomaterials)
IT **Jellyfish**
(**collagen** gels from; support with **collagen** base for tissue engineering and manufacture of biomaterials)
IT Membrane, biological
(**collagenous**; support with **collagen** base for tissue engineering and manufacture of biomaterials)
IT Neoplasm
(cultures of; support with **collagen** base for tissue engineering and manufacture of biomaterials)
IT Human
(elderly; support with **collagen** base for tissue engineering and manufacture of biomaterials)
IT Blood vessel
(endothelium; support with **collagen** base for tissue engineering and manufacture of biomaterials)
IT Animal tissue
(engineering; support with **collagen** base for tissue engineering and manufacture of biomaterials)
IT Skin
(keratinocyte; support with **collagen** base for tissue engineering and manufacture of biomaterials)
IT Nerve
(neuron; support with **collagen** base for tissue engineering and manufacture of biomaterials)
IT Sebaceous gland
(sebocyte; support with **collagen** base for tissue engineering and manufacture of biomaterials)
IT Medical goods
(sponges, **collagen**; support with **collagen** base for tissue engineering and manufacture of biomaterials)
IT Animal tissue culture
Blood cell
Chondrocyte
Dendritic cell
Drug screening
Drying
Fibroblast
Freeze drying
Melanocyte
Osteoblast

Searched by P. Ruppel

Osteocyte
Transformation, genetic
(support with **collagen** base for tissue engineering and manufacture of biomaterials)

IT **Collagens**, biological studies
RL: BSU (Biological study, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(support with **collagen** base for tissue engineering and manufacture of biomaterials)

IT Glycosaminoglycans, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(support with **collagen** base for tissue engineering and manufacture of biomaterials)

IT Chemokines
Cytokines
Growth factors, animal
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(support with **collagen** base for tissue engineering and manufacture of biomaterials)

IT 9000-07-1, Carrageenan 9004-34-6D, Cellulose, derivs. 9004-54-0, Dextran, biological studies 9005-32-7D, Alginic acid, salts 9012-76-4, Chitosan
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(support with **collagen** base for tissue engineering and manufacture of biomaterials)

L32 ANSWER 2 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:884552 HCAPLUS
DOCUMENT NUMBER: 139:369832
TITLE: A method for obtaining **collagens** from **jellyfish**
INVENTOR(S): Tagawa, Hideo
PATENT ASSIGNEE(S): Ryoyo Sangyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003321497	A2	20031111	JP 2002-160735	20020424

PRIORITY APPLN. INFO.: JP 2002-160735 20020424

AB This invention relates to an automated system to obtain collagens from jellyfish. The jellyfish collected from underwater are separated using automatic strainer, frozen at -20°, then thawed, and from a solid (.apprx. 4 %), a water-soluble protein is separated to obtain collagens to be used for medical and food products.

IC ICM C07K014-78
ICS A23J001-04

CC 63-8 (Pharmaceuticals)
Section cross-reference(s): 17

ST **collagen jellyfish** freezing thawing

IT Freezing

(-thawing; freezing and thawing **jellyfish** for obtaining **collagens**)

IT **Jellyfish**
(freezing and thawing **jellyfish** for obtaining **collagens**)

IT **Collagens**, biological studies
RL: FFD (Food or feed use); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(freezing and thawing **jellyfish** for obtaining **collagens**)

L32 ANSWER 3 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:142747 HCAPLUS
DOCUMENT NUMBER: 138:175496
TITLE: Volume reduction of **jellyfish** with **collagenase**
INVENTOR(S): Ogushi, Yasuyuki; Takeuchi, Yoshiyuki; Kono, Susumu; Nakayama, Hiroyuki; Kawabata, Toyoki; Oka, Yosuke; Yanagawa, Toshiharu; Naganuma, Takeshi; Nagao, Hiroshi
PATENT ASSIGNEE(S): Mitsubishi Heavy Industries, Ltd., Japan; Chugoku Electric Power Co.
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003053303	A2	20030225	JP 2001-211048	20010711

PRIORITY APPLN. INFO.: JP 2001-121488 A 20010419
JP 2001-170054 A 20010605

AB The process involves treating jellyfish with collagenase or bacteria [e.g., Bacillus sp. J26W (FERM P-18313)] producing enzymes which degrade collagen fibers constituting the bodies of jellyfish and removing water from the bodies for volume reduction The process is applicable to treatment of seawater containing a large quantity of jellyfish or jellyfish collected from seawater used for cooling water in power plants, etc.

IC ICM B09B003-00
ICS C12N001-20; C12R001-07; C12R001-63

CC 61-8 (Water)
Section cross-reference(s): 7, 10, 60

ST seawater **jellyfish** vol redn **collagenase** Bacillus; cooling water **jellyfish** vol redn **collagenase**

IT Water purification
(fouling control; volume reduction of **jellyfish** with **collagenase** of Bacillus for use of seawater as cooling water)

IT Aurelia aurita
Bacillus (bacterium genus)
Cooling water
Jellyfish
Seawater
(volume reduction of **jellyfish** with **collagenase** of Bacillus for use of seawater as cooling water)

IT **Collagen** fibers

RL: BCP (Biochemical process); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(volume reduction of **jellyfish** with **collagenase** of Bacillus for use of seawater as cooling water)

IT 9001-12-1P, **Collagenase**
RL: NUU (Other use, unclassified); PUR (Purification or recovery); PREP (Preparation); USES (Uses)
(volume reduction of **jellyfish** with **collagenase** of Bacillus for use of seawater as cooling water)

L32 ANSWER 4 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:23859 HCAPLUS
DOCUMENT NUMBER: 136:90696
TITLE: Method and process for the production of **collagen** preparations from invertebrate marine animals and compositions thereof
INVENTOR(S): Wolfinbarger, Lloyd, Jr.
PATENT ASSIGNEE(S): Bioscience Consultants, L.L.C., USA
SOURCE: U.S., 10 pp., Cont.-in-part of U.S. 5,714,582.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6337389	B1	20020108	US 1997-959272	19971028
US 5714582	A	19980203	US 1995-405979	19950317

PRIORITY APPLN. INFO.: US 1995-405979 A2 19950317

AB The present invention relates to a process for the production of marine invertebrate type V telopeptide-containing collagen prepns. from marine invertebrates, such as jellyfish, compns. containing prepns., and methods of using these prepns. The methods consist of (a) treating the collagen-containing materials with an organic acid, e.g., acetic or citric acid, (b) precipitating the collagen with a salt solution, (c) removing the salt by washing with water, and (d) resolubilizing the precipitated collagen with an acid. The collagen preparation includes telopeptide-containing and optionally invertebrate atelopeptide-containing, type V fibrillar collagen. The present collagen prepns. may be employed in a variety of products including, e.g., cosmetic, pharmacol., dental, and cell culture products. For example, a hair conditioner composition contains (by weight) 30.0-95% water, 0.5-30.0% conditioning agent, and 0.001-30.0% type V collagen obtained from marine invertebrate.

IC ICM A61K038-17
ICS A61K007-06; C07K001-00
NCL 530356000
CC 62-4 (Essential Oils and Cosmetics)
Section cross-reference(s): 9, 12, 63
ST **collagen** marine invertebrate cosmetic biomedical
IT **Collagens**, biological studies
RL: BUU (Biological use, unclassified); COS (Cosmetic use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(atelocollagens, type V; production of **collagen** prepns. from invertebrate marine animals for biomedical and cosmetic uses)
IT Gelatins, biological studies
RL: BUU (Biological use, unclassified); COS (Cosmetic use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**collagen**-containing; production of **collagen** prepns. from invertebrate marine animals for biomedical and cosmetic uses)
IT Hair preparations
(conditioners; production of **collagen** prepns. from invertebrate marine animals for biomedical and cosmetic uses)
IT Cosmetics
(creams, moisturizers; production of **collagen** prepns. from invertebrate marine animals for biomedical and cosmetic uses)
IT Cosmetics
(makeups; production of **collagen** prepns. from invertebrate marine animals for biomedical and cosmetic uses)
IT Cnidaria
(marine; production of **collagen** prepns. from invertebrate marine animals for biomedical and cosmetic uses)
IT Cosmetics
(moisturizers, lotions; production of **collagen** prepns. from invertebrate marine animals for biomedical and cosmetic uses)
IT Cosmetics
Freeze drying
Jellyfish
Marine invertebrate
Scyphozoa
Shampoos
(production of **collagen** prepns. from invertebrate marine animals for biomedical and cosmetic uses)
IT **Collagen** fibers
RL: BUU (Biological use, unclassified); COS (Cosmetic use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(production of **collagen** prepns. from invertebrate marine animals for biomedical and cosmetic uses)
IT **Collagens**, biological studies
RL: BUU (Biological use, unclassified); COS (Cosmetic use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(type V; production of **collagen** prepns. from invertebrate marine animals for biomedical and cosmetic uses)
IT 7647-14-5, Sodium chloride, uses
RL: NUU (Other use, unclassified); USES (Uses)
(precipitation by; production of **collagen** prepns. from invertebrate marine animals for biomedical and cosmetic uses)
IT 64-19-7, Acetic acid, uses 77-92-9, Citric acid, uses
RL: NUU (Other use, unclassified); USES (Uses)
(production of **collagen** prepns. from invertebrate marine animals for biomedical and cosmetic uses)
REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 5 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:377722 HCAPLUS
DOCUMENT NUMBER: 136:374459

TITLE: System for recovering valuable substances from **jellyfish** in seawater to be used for cooling
INVENTOR(S): Hamazaki, Akihiro; Nakamura, Hiroshi; Ogawa, Naoki; Yoshimi, Katsuji; Higuchi, Tetsuro; Sagawa, Hiroshi
PATENT ASSIGNEE(S): Mitsubishi Heavy Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002143824	A2	20020521	JP 2000-347006	20001114

PRIORITY APPLN. INFO.: JP 2000-347006 20001114

AB The system for recovering and utilizing protein components as valuable substances from jellyfish by crushing jellyfish, dissolving protein components by a dissoln. means, adsorbing the protein components on foams and separating the resulting foams by foaming and separating means. The protein components may be used for producing compost, collagens, or gelatins. Jellyfish as a pollutant can be removed from seawater to be used for cooling in a power plant.

IC ICM B09B005-00
ICS B09B003-00; C02F011-02; C07K001-02; C07K014-435

CC 61-5 (Water)
Section cross-reference(s): 19

ST **jellyfish** protein valuable substance recovery seawater; cooling seawater compost recovery **jellyfish** removal; gelatin recovery **jellyfish** removal cooling seawater; **collagen** recovery **jellyfish** removal cooling seawater

IT Water purification
(of **jellyfish**; valuable substance recovery system for recovering compost, **collagen**, or compost from **jellyfish** from cooling seawater)

IT Compost
Jellyfish
Seawater
(valuable substance recovery system for recovering compost, **collagen**, or compost from **jellyfish** from cooling seawater)

IT **Collagens**, preparation
Gelatins, preparation
RL: BYP (Byproduct); PREP (Preparation)
(valuable substance recovery system for recovering compost, **collagen**, or compost from **jellyfish** from cooling seawater)

L32 ANSWER 6 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:3544 HCAPLUS
DOCUMENT NUMBER: 139:361801
TITLE: A zebrafish sox9 gene required for cartilage morphogenesis. [Erratum to document cited in CA138:201889]
AUTHOR(S): Yan, Yi-Lin; Miller, Craig T.; Nissen, Robert M.; Singer, Amy; Liu, Dong; Kirn, Anette; Draper, Bruce;

Willoughby, John; Morcos, Paul A.; Amsterdam, Adam; Chung, Bon--hu.; Westerfield, Monte; Haffter, Pascal; Hopkins, Nancy; Kimmel, Charles; Postlethwait, John H.
CORPORATE SOURCE: Institute of Neuroscience, University of Oregon, Eugene, OR, 97403, USA
SOURCE: Development (Cambridge, United Kingdom) (2002), 129(23), 5551
CODEN: DEVPED; ISSN: 0950-1991
PUBLISHER: Company of Biologists Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The name of the third author, Robert M. Nissen, was misspelled.
CC 12-3 (Nonmammalian Biochemistry)
Section cross-reference(s): 3, 6
IT Mutation
(**jellyfish**; zebrafish sox9 gene sequence and role in cartilage morphogenesis (Erratum))
IT **Collagens**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(zebrafish sox9 gene sequence and role in cartilage morphogenesis (Erratum))

L32 ANSWER 7 OF 41 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2002667914 MEDLINE
DOCUMENT NUMBER: 22283643 PubMed ID: 12397114
TITLE: A zebrafish sox9 gene required for cartilage morphogenesis.
COMMENT: Erratum in: Development 2002 Dec;129(23):5551
Erratum in: Nissen Robert [corrected to Nissen Robert M]
AUTHOR: Yan Yi-Lin; Miller Craig T; Nissen Robert M; Singer Amy; Liu Dong; Kirn Anette; Draper Bruce; Willoughby John; Morcos Paul A; Amsterdam Adam; Chung Bon-Chu; Westerfield Monte; Haffter Pascal; Hopkins Nancy; Kimmel Charles; Postlethwait John H; Nissen Robert
CORPORATE SOURCE: Institute of Neuroscience, University of Oregon, Eugene 97403, USA.
CONTRACT NUMBER: P01HD22486 (NICHD)
R01 DC04186 (NIDCD)
R01 RR12589 (NCRR)
R01DE13834 (NIDCR)
R01RR10715 (NCRR)
SOURCE: DEVELOPMENT, (2002 Nov) 129 (21) 5065-79.
Journal code: 8701744. ISSN: 0950-1991.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200212
ENTRY DATE: Entered STN: 20021114
Last Updated on STN: 20021217
Entered Medline: 20021203
AB The molecular genetic mechanisms of cartilage construction are incompletely understood. Zebrafish embryos homozygous for **jellyfish** (jef) mutations show craniofacial defects and lack cartilage elements of the neurocranium, pharyngeal arches, and pectoral girdle similar to humans with campomelic dysplasia. We show that two alleles of jef contain mutations in sox9a, one of two zebrafish orthologs of the human transcription factor SOX9. A mutation induced by ethyl

nitrosourea changed a conserved nucleotide at a splice junction and severely reduced splicing of sox9a transcript. A retrovirus insertion into sox9a disrupted its DNA-binding domain. Inhibiting splicing of the sox9a transcript in wild-type embryos with splice site-directed morpholino antisense oligonucleotides produced a phenotype like jef mutant larvae, and caused sox9a transcript to accumulate in the nucleus; this accumulation can serve as an assay for the efficacy of a morpholino independent of phenotype. RNase-protection assays showed that in morpholino-injected animals, the percent of splicing inhibition decreased from 80% at 28 hours post fertilization to 45% by 4 days. Homozygous mutant embryos had greatly reduced quantities of col2a1 message, the major **collagen** of cartilage. Analysis of dlx2 expression showed that neural crest specification and migration was normal in jef (sox9a) embryos. Confocal images of living embryos stained with BODIPY-ceramide revealed at single-cell resolution the formation of precartilage condensations in mutant embryos. Besides the lack of overt cartilage differentiation, pharyngeal arch condensations in jef (sox9a) mutants lacked three specific morphogenetic behaviors: the stacking of chondrocytes into orderly arrays, the individuation of pharyngeal cartilage organs and the proper shaping of individual cartilages. Despite the severe reduction of cartilages, analysis of titin expression showed normal muscle patterning in jef (sox9a) mutants. Likewise, calcein labeling revealed that early bone formation was largely unaffected in jef (sox9a) mutants. These studies show that jef (sox9a) is essential for both morphogenesis of condensations and overt cartilage differentiation.

CT Check Tags: Animal; Comparative Study; Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, Non-P.H.S.; Support, U.S. Gov't, P.H.S.

Alleles
Base Sequence
Bone Development: GE, genetics
Cartilage: AB, abnormalities
*Cartilage: EM, embryology
Cartilage: GD, growth & development
Chondrogenesis: GE, genetics
Chondrogenesis: PH, physiology
DNA, Complementary: GE, genetics
Disease Models, Animal
Gene Duplication
Gene Expression Regulation, Developmental
*High Mobility Group Proteins: GE, genetics
High Mobility Group Proteins: PH, physiology
Muscles: EM, embryology
Mutation
Oligodeoxyribonucleotides, Antisense: GE, genetics
Oligodeoxyribonucleotides, Antisense: PD, pharmacology
Osteochondrodysplasias: EM, embryology
Osteochondrodysplasias: GE, genetics
Pharynx: EM, embryology
RNA Splicing: DE, drug effects
*Transcription Factors: GE, genetics
Transcription Factors: PH, physiology
*Zebrafish: EM, embryology
*Zebrafish: GE, genetics
Zebrafish: GD, growth & development

CN 0 (DNA, Complementary); 0 (High Mobility Group Proteins); 0 (Oligodeoxyribonucleotides, Antisense); 0 (SOX9 protein); 0 (Transcription Factors)

L32 ANSWER 8 OF 41 MEDLINE on STN
ACCESSION NUMBER: 2002681421 MEDLINE
DOCUMENT NUMBER: 22229466 PubMed ID: 12244130
TITLE: Nowa, a novel protein with minicollagen Cys-rich domains, is involved in nematocyst formation in Hydra.
COMMENT: Erratum in: J Cell Sci. 2002 Dec 1;115(Pt. 23):4719
Erratum in: Oezbek S [corrected to Ozbek S] and Engel R [corrected to Streitwolf-Engel R]
AUTHOR: Engel Ulrike; Ozbek Suat; Streitwolf-Engel Ruth; Petri Barbara; Lottspeich Friedrich; Holstein Thomas W; Oezbek Suat; Engel Ruth
CORPORATE SOURCE: Institute of Zoology, Darmstadt University of Technology, 64287 Darmstadt, Germany.
SOURCE: JOURNAL OF CELL SCIENCE, (2002 Oct 15) 115 (Pt 20) 3923-34. Journal code: 0052457. ISSN: 0021-9533.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF539862
ENTRY MONTH: 200307
ENTRY DATE: Entered STN: 20021122
Last Updated on STN: 20030715
Entered Medline: 20030714

AB The novel protein Nowa was identified in nematocysts, explosive organelles of Hydra, **jellyfish**, corals and other CNIDARIA: Biogenesis of these organelles is complex and involves assembly of proteins inside a post-Golgi vesicle to form a double-layered capsule with a long tubule. Nowa is the major component of the outer wall, which is formed very early in morphogenesis. The high molecular weight glycoprotein has a modular structure with an N-terminal sperm coating glycoprotein domain, a central C-type lectin-like domain, and an eightfold repeated cysteine-rich domain at the C-terminus. Interestingly, the cysteine-rich domains are homologous to the cysteine-rich domains of minicollagens. We have previously shown that the cysteines of these minicollagen cysteine-rich domains undergo an isomerization process from intra- to intermolecular disulfide bonds, which mediates the crosslinking of minicollagens to networks in the inner wall of the capsule. The minicollagen cysteine-rich domains present in both proteins provide a potential link between Nowa in the outer wall and minicollagens in the inner wall. We propose a model for nematocyst formation that integrates cytoskeleton rearrangements around the post-Golgi vesicle and protein assembly inside the vesicle to generate a complex structure that is stabilized by intermolecular disulfide bonds.

CT Check Tags: Animal; Support, Non-U.S. Gov't
Amino Acid Sequence
Antibodies, Monoclonal: ME, metabolism
Antigens, Surface: CH, chemistry
Antigens, Surface: ME, metabolism
***Collagen: CH, chemistry**
Collagen: ME, metabolism
Cysteine: CH, chemistry
Disulfides: CH, chemistry
Electrophoresis, Gel, Two-Dimensional
Escherichia coli: GE, genetics
*Glycoproteins: CH, chemistry

Glycoproteins: ME, metabolism
Glycosylation
Hydra: CY, cytology
*Hydra: ME, metabolism
Hydra: UL, ultrastructure
Microtubules: ME, metabolism
Microtubules: UL, ultrastructure
Models, Biological
Molecular Sequence Data
Molecular Weight
Protein Conformation
Protein Folding
Protein Structure, Tertiary
Protein Transport
RNA, Messenger: ME, metabolism
Recombinant Proteins: ME, metabolism
Repetitive Sequences, Amino Acid
Sequence Homology, Amino Acid
RN 52-90-4 (Cysteine); **9007-34-5 (Collagen)**
CN 0 (Antibodies, Monoclonal); 0 (Antigens, Surface); 0 (Disulfides); 0 (Glycoproteins); 0 (RNA, Messenger); 0 (Recombinant Proteins)

L32 ANSWER 9 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:479261 HCAPLUS
DOCUMENT NUMBER: 135:43913
TITLE: **Collagen** extraction from Aurelia and aquatic organism
INVENTOR(S): Ikeda, Tadao; Obu, Etsuji
PATENT ASSIGNEE(S): Toshiba Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001178492	A2	20010703	JP 1999-369047	19991227

PRIORITY APPLN. INFO.: JP 1999-369047 19991227
AB Aquatic organism, especially Aurelia, is minced/homogenized to release enzymes such as alkaline protease, incubation to solubilize the minced tissue, and isolation of the collagen and other physiol. useful substances. The method gives higher yield that do the prior arts.
IC ICM C12P021-06
ICS B01D011-04; C12N009-64; C12M001-00; C12M001-06
CC 12-1 (Nonmammalian Biochemistry)
Section cross-reference(s): 16, 17, 60
ST **jellyfish** Aurelia **collagen** isolation
IT Aquatic animal
Aurelia
Jellyfish
(**collagen** extraction from Aurelia and aquatic organism)
IT **Collagens**, preparation
RL: PUR (Purification or recovery); PREP (Preparation)
(**collagen** extraction from Aurelia and aquatic organism)
IT 9001-92-7, Protease

RL: CAT (Catalyst use); USES (Uses)
(alkaline; **collagen** extraction from Aurelia and aquatic organism)

L32 ANSWER 10 OF 41 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2001371654 MEDLINE
DOCUMENT NUMBER: 21299365 PubMed ID: 11406583
TITLE: A switch in disulfide linkage during minicollagen assembly in Hydra nematocysts.
AUTHOR: Engel U; Pertz O; Fauser C; Engel J; David C N; Holstein T W
CORPORATE SOURCE: Institute of Zoology, Technical University of Darmstadt, Schnittspahnstrasse 10, D-64287 Darmstadt, Institute of Zoology, University of Munich, Luisenstrasse 14, D-80333 Munich, Germany.
SOURCE: EMBO JOURNAL, (2001 Jun 15) 20 (12) 3063-73.
Journal code: 8208664. ISSN: 0261-4189.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200107
ENTRY DATE: Entered STN: 20010730
Last Updated on STN: 20010730
Entered Medline: 20010726

AB The smallest known **collagens** with only 14 Gly-X-Y repeats referred to as minicollagens are the main constituents of the capsule wall of nematocysts. These are explosive organelles found in Hydra, **jellyfish**, corals and other Cnidaria. Minicollagen-1 of Hydra recombinantly expressed in mammalian 293 cells contains disulfide bonds within its N- and C-terminal Cys-rich domains but no interchain cross-links. It is soluble and self-associates through non-covalent interactions to form 25-nm-long trimeric helical rod-like molecules. We have used a polyclonal antibody prepared against the recombinant protein to follow the maturation of minicollagens from soluble precursors present in the endoplasmic reticulum and post-Golgi vacuoles to the disulfide-linked insoluble assembly form of the wall. The switch from intra- to intermolecular disulfide bonds is associated with 'hardening' of the capsule wall and provides an explanation for its high tensile strength and elasticity. The process is comparable to disulfide reshuffling between the NC1 domains of **collagen** IV in mammalian basement membranes.

CT Check Tags: Animal; Support, Non-U.S. Gov't
Amino Acid Sequence
***Collagen: BI, biosynthesis**
Collagen: GE, genetics
Collagen: SE, secretion
*Disulfides: ME, metabolism
Glycosylation
Hydra
Molecular Sequence Data
Protein Precursors: BI, biosynthesis
Protein Processing, Post-Translational
Recombinant Fusion Proteins: BI, biosynthesis
Recombinant Fusion Proteins: GE, genetics
Recombinant Fusion Proteins: SE, secretion
Solubility

RN **9007-34-5 (Collagen)**

CN 0 (Disulfides); 0 (Protein Precursors); 0 (Recombinant Fusion Proteins)

L32 ANSWER 11 OF 41 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2001393798 MEDLINE
DOCUMENT NUMBER: 21127198 PubMed ID: 11223087
TITLE: Partial purification and characterization of a hemolysin (CAH1) from Hawaiian box **jellyfish** (Carybdea alata) venom.
AUTHOR: Chung J J; Ratnapala L A; Cooke I M; Yanagihara A A
CORPORATE SOURCE: Bekesy Laboratory of Neurobiology, Pacific Biomedical Research Center, University of Hawaii at Manoa, Honolulu, HI 96822, USA.
SOURCE: TOXICON, (2001 Jul) 39 (7) 981-90.
Journal code: 1307333. ISSN: 0041-0101.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200107
ENTRY DATE: Entered STN: 20010716
Last Updated on STN: 20010716
Entered Medline: 20010712

AB We have isolated and characterized a novel hemolytic protein from the venom of the Hawaiian box **jellyfish** (Carybdea alata). Hemolysis of sheep red blood cells was used to quantitate hemolytic potency of crude venom extracted from isolated nematocysts and venom after fractionation and purification procedures. Hemolytic activity of crude venom was reduced or lost after exposure to the proteolytic enzymes trypsin, **collagenase** and papain. The activity exhibited lectin-like properties in that hemolysis was inhibited by D-lactulose and certain other sugars. Activity was irreversibly lost after dialysis of crude venom against divalent-free, 20mM EDTA buffer; it was optimal in the presence of 10mM Ca2+ or Mg2+. Two chromatographic purification methods, size fractionation on Sephadex G-200 and anion exchange with quaternary ammonium, provided fractions in which hemolytic activity corresponded to the presence of a protein band with an apparent molecular weight of 42kDa by SDS-PAGE. We have designated this protein as CAH1. The N-terminal sequence of CAH1 was determined to be: XAADAXSTDIDD/GIIG.

CT Check Tags: Animal; In Vitro; Support, Non-U.S. Gov't; Support, U.S. Gov't, Non-P.H.S.; Support, U.S. Gov't, P.H.S.
Carbohydrates: TO, toxicity
Cations: CH, chemistry
Chromatography, Ion Exchange
*Cnidarian Venoms: CH, chemistry
Cnidarian Venoms: IP, isolation & purification
Cnidarian Venoms: TO, toxicity
Endopeptidases: CH, chemistry
*Hemolysins: CH, chemistry
Hemolysins: IP, isolation & purification
Hemolysins: TO, toxicity
Hemolysis: DE, drug effects
Indicators and Reagents
Proteins: CH, chemistry
Sheep
Temperature

CN 0 (Carbohydrates); 0 (Cations); 0 (Cnidarian Venoms); 0 (Hemolysins); 0 (Indicators and Reagents); 0 (Proteins); 0 (hemolysin CAH1); EC 3.4.-

(Endopeptidases)

L32 ANSWER 12 OF 41 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2001:528450 BIOSIS
DOCUMENT NUMBER: PREV200100528450
TITLE: **Jellyfish** as food.
AUTHOR(S): Hsieh, Y.-H. Peggy [Reprint author]; Leong, Fui-Ming; Rudloe, Jack
CORPORATE SOURCE: Department of Nutrition and Food Science, Auburn University, Auburn, AL, 36849, USA
hsiehyp@auburn.edu
SOURCE: Hydrobiologia, (May, 2001) No. 451, pp. 11-17. print.
CODEN: HYDRB8. ISSN: 0018-8158.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 14 Nov 2001
Last Updated on STN: 23 Feb 2002

AB **Jellyfish** have been exploited commercially by Chinese as an important food for more than a thousand years. Semi-dried **jellyfish** represent a multi-million dollar seafood business in Asia. Traditional processing methods involve a multi-phase processing procedure using a mixture of salt (NaCl) and alum (AlK(SO4)2 cntdot 12 H2O) to reduce the water content, decrease the pH, and firm the texture. Processed **jellyfish** have a special crunchy and crispy texture. They are then desalted in water before preparing for consumption. Interest in utilizing **Stomolophus** meleagris L. Agassiz, cannonball **jellyfish**, from the U. S. as food has increased recently because of high consumer demand in Asia. Desalted ready-to-use (RTU) cannonball **jellyfish** consists of approximately 95% water and 4-5% protein, which provides a very low caloric value. Cannonball **jellyfish collagen** has shown a suppressing effect on antigen-induced arthritis in laboratory rats. With the great abundance of cannonball **jellyfish** in the U. S. coastal waters, turning this **jellyfish** into value-added products could have tremendous environmental and economic benefits.

CC Ecology: environmental biology - General and methods 07502
General biology - Conservation and resource management 00512
Ecology: environmental biology - Wildlife management: aquatic 07516
Food technology - General and methods 13502
Invertebrata: comparative, experimental morphology, physiology and pathology - Cnidaria 64008

IT Major Concepts
Foods; Wildlife Management (Conservation)

IT Chemicals & Biochemicals
alum; sodium chloride

IT Miscellaneous Descriptors
pH; water content

GT China (Palearctic region)

ORGN Classifier
Cnidaria 41000
Super Taxa
Invertebrata; Animalia
Organism Name
Stomolophus meleagris
jellyfish: fisheries species
Taxa Notes
Animals, Invertebrates

RN 10043-01-3Q (alum)
10043-67-1Q (alum)
7647-14-5 (sodium chloride)

L32 ANSWER 13 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:538084 HCAPLUS
DOCUMENT NUMBER: 133:121633
TITLE: Functional fibers treated with mixtures containing functional substances, hydrolyzed proteins and crosslinking agents with good washfastness of functional properties and manufacture thereof and finishing solutions therefor
INVENTOR(S): Monobe, Akio; Sakaida, Tsutomu; Kawai, Yoshifumi; Mizutani, Hiroshi; Konishi, Hiroaki; Kitano, Michio; Chatani, Etsushi
PATENT ASSIGNEE(S): Nippon Menard Cosmetic Co., Ltd., Japan; Aichi Prefecture
SOURCE: Jpn. Tokkyo Koho, 12 pp.
CODEN: JTXXFF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 3038202	B1	20000508	JP 1999-8805	19990118
JP 2000212874	A2	20000802		

PRIORITY APPLN. INFO.: JP 1999-8805 19990118

AB The functional fibers are prepared by treating fibers with compns. comprising functional substances, mixts. of hydrolyzed proteins (A) with average mol. weight (Mw) 2000-6000 and hydrolyzed proteins (B) with Mw 10,000-80,000 with ratio of weight of A to weight of B 0.02-50, and crosslinking agents and heat-treating the fibers. The fibers are antiallergic and are useful for improvement of blood circulation of bodies and slenderizing of anatomical bodies. A nylon fabric was treated with an aqueous solution containing caffeine 2.0, Promois W 4000 (hydrolyzed collagen with Mw 4000) 1.5, HCP-M 15 (hydrolyzed collagen with Mw 29,000) 1.0, and FS-9000 (isocyanate crosslinking agent) 1.5% to pickup 80%, dried, and heat-treated 3 min at 130° to give a functional fabric with caffeine content 0.31% initially and 0.13% after 50 washings.

IC ICM D06M015-15
ICS D06M013-35; D06M013-395
ICI D06M101-34
CC 40-9 (Textiles and Fibers)
Section cross-reference(s): 63
ST washfast functional finish fiber; hydrolyzed protein functional finish fabric; **collagen** hydrolyzed functional finish fabric; fibroin hydroyzed functional finish fabric; wool keratin hydrolyzed functional finish fabric; caffeine functional finish nylon fabric; fabric functional finish washfast; polyamide fabric functional finish caffeine; antiallergic functional finish fabric washfast; blood circulation improvement fiber functional finish; anatomical body slenderizing property fiber functional finish
IT Fomes japonicus

Jellyfish
(extract; functional fibers treated with mixts. containing functional substances, hydrolyzed proteins and crosslinking agents with good washfastness of functional properties)

IT **Collagens**, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(hydrolyzates, Promois W 4000, HCP-M 15; functional fibers treated with mixts. containing functional substances, hydrolyzed proteins and crosslinking agents with good washfastness of functional properties)

L32 ANSWER 14 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:822613 HCAPLUS
DOCUMENT NUMBER: 134:9381
TITLE: Production of a deodorized marine **collagen** product for use in cosmetics and pharmaceuticals
INVENTOR(S): Allard, Roland; Abdul, Malak Nabil; Huc, Alain
PATENT ASSIGNEE(S): Coletica, Fr.
SOURCE: Ger. Offen., 8 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19929802	A1	20001123	DE 1999-19929802	19990629
FR 2801313	A1	20010525	FR 1999-6326	19990519
US 6660280	B1	20031209	US 1999-435934	19991109
FR 2801314	A1	20010525	FR 2000-6190	20000516
FR 2801314	B1	20020510		
JP 2001009020	A2	20010116	JP 2000-148523	20000519
JP 3327540	B2	20020924		

PRIORITY APPLN. INFO.: FR 1999-6326 A 19990519

AB A marine collagen product is disclosed which can be obtained from marine animals such as fish, jellyfish, mollusks, or muscles and is characterized by absence of strong odor in the collagen or hydrolyzates thereof. The collagen is subjected to a deodorizing process involving oxidation with the aid of metabisulfite, hydrogen peroxide, ozone, etc.

IC ICM C07K014-78
ICS C07K001-14; A61K007-00; A61K038-39; C08L089-00

CC 63-7 (Pharmaceuticals)

ST marine **collagen** deodorizing cosmetic pharmaceutical

IT Medical goods
(dressings, hemostatic; production of a deodorized marine **collagen** product for use in cosmetics and pharmaceuticals)

IT Drug delivery systems
(films, **collagen**; production of a deodorized marine **collagen** product for use in cosmetics and pharmaceuticals)

IT Skin
(fish; production of a deodorized marine **collagen** product for use in cosmetics and pharmaceuticals)

IT Medical goods
(hemostatic sponges; production of a deodorized marine **collagen** product for use in cosmetics and pharmaceuticals)

IT **Collagens**, biological studies

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)
(hydrolyzates; production of a deodorized marine **collagen** product for use in cosmetics and pharmaceuticals)

IT Deodorization
Fish
Freeze drying
Hydrolysis
Jellyfish
Marine animal
Mollusk (Mollusca)
Odor and Odorous substances
Oxidizing agents
Plaice
Sole
Wound healing promoters
(production of a deodorized marine **collagen** product for use in cosmetics and pharmaceuticals)

IT **Collagens**, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)
(production of a deodorized marine **collagen** product for use in cosmetics and pharmaceuticals)

IT Sulfites
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(production of a deodorized marine **collagen** product for use in cosmetics and pharmaceuticals)

IT Cartilage
(reconstruction of; production of a deodorized marine **collagen** product for use in cosmetics and pharmaceuticals)

IT Medical goods
(sponges; production of a deodorized marine **collagen** product for use in cosmetics and pharmaceuticals)

IT Crosslinking
(thermal, dehydrational; production of a deodorized marine **collagen** product for use in cosmetics and pharmaceuticals)

IT Drying
(vacuum; production of a deodorized marine **collagen** product for use in cosmetics and pharmaceuticals)

IT 7722-84-1, Hydrogen peroxide, biological studies 10028-15-6, Ozone, biological studies 23134-05-6, Metabisulfite
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(production of a deodorized marine **collagen** product for use in cosmetics and pharmaceuticals)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 15 OF 41 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2001:364452 BIOSIS
DOCUMENT NUMBER: PREV200100364452
TITLE: Material properties shape dynamical responses of hydrozoan

jellyfish.

AUTHOR(S): Goldman, E. B. [Reprint author]; Daniel, T. L.
CORPORATE SOURCE: University of Washington, Seattle, WA, USA
SOURCE: American Zoologist, (December, 2000) Vol. 40, No. 6, pp. 1030. print.
Meeting Info.: Annual Meeting and Exhibition of the Society for Integrative and Comparative Biology. Chicago, Illinois, USA. January 03-07, 2001. Society for Integrative and Comparative Biology.
CODEN: AMZOAF. ISSN: 0003-1569.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 2 Aug 2001
Last Updated on STN: 19 Feb 2002

AB Radially symmetrical and composed of acellular mesoglea, two cell layers, and a primitive nervous system, **jellyfish** are an elegantly simple launching point to investigate how material properties of the musculoskeletal system shape the dynamics of locomotion. Mesoglea, composed of mucopolysaccharides, **collagen**, and water, has a characteristic nonlinear response to an applied strain. This study asks how such nonlinearities determine the dynamical response of a **jellyfish**'s simple geometry subject to periodic forcing. We compare the strain-dependent stiffness of mesoglea between three species of **jellyfish**, Mitrocoma cellularia, Polyorchis penicillatus, and Aequorea victoria, each with a distinctive overall shape. Because of the nonlinear and time-dependent behavior of mesoglea, we measure the complex modulus by recording its stress in response to sinusoidal strains at a variety of frequencies and mean lengths. Using a simple power law to fit the resultant relationships between complex modulus and mean length, we describe the strength of nonlinearity in mesoglea by the size of the exponent. Aequorea victoria, a **jellyfish** with unevenly distributed mesoglea and unusual swimming kinematics, has the highest mesoglea exponent, making it the most strongly nonlinear, while Mitrocoma cellularia, a **jellyfish** with a relatively simple geometry and typical swimming kinematics, has the lowest. The exponent describing the mesoglea of Polyorchis penicillatus falls in between, although it more closely resembles Aequorea. Armed with these estimates, we use a simple dynamical model to show that very subtle changes in the strength of the nonlinearity are manifest as significant changes in the spectral responses of the musculoskeletal system to periodic forcing.

CC General biology - Symposia, transactions and proceedings 00520
Muscle - Physiology and biochemistry 17504
Bones, joints, fasciae, connective and adipose tissue - Physiology and biochemistry 18004
Invertebrata: comparative, experimental morphology, physiology and pathology - Cnidaria 64008
IT Major Concepts
Muscular System (Movement and Support); Skeletal System (Movement and Support)
IT Parts, Structures, & Systems of Organisms
mesoglea; musculoskeletal system: muscular system
IT Miscellaneous Descriptors
locomotion dynamics; periodic forcing; radial symmetry; simple dynamical model; swimming; Meeting Abstract
ORGN Classifier
Cnidaria 41000

Super Taxa
Invertebrata; Animalia
Organism Name
Aequorea victoria: **jellyfish**
Mitrocoma cellularia: **jellyfish**
Polyorchis penicillatus: **jellyfish**
Taxa Notes
Animals, Invertebrates

L32 ANSWER 16 OF 41 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 4
ACCESSION NUMBER: 2000:349105 BIOSIS
DOCUMENT NUMBER: PREV200000349105
TITLE: Isolation and characterization of **collagen** from rhizostomous **jellyfish** (Rhopilema asamushi).
AUTHOR(S): Nagai, Takeshi [Reprint author]; Worawattanamateekul, Wanchai; Suzuki, Nobutaka; Nakamura, Takashi; Ito, Tatsumi; Fujiki, Kazuhiro; Nakao, Miki; Yano, Tomoki
CORPORATE SOURCE: National Fisheries University, Shimonoseki, Yamaguchi, 759-6595, Japan
SOURCE: Food Chemistry, (August, 2000) Vol. 70, No. 2, pp. 205-208. print.
CODEN: FOCHDJ. ISSN: 0308-8146.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 16 Aug 2000
Last Updated on STN: 7 Jan 2002

AB As a part of the study into the potential development of unused and under-used resources, **collagen** was isolated from the mesogloea of the rhizostomous **jellyfish**, Rhopilema asamushi, by limited pepsin digestion and characterized. The yield of this **collagen** was high (35.2% on a dry weight basis). The primary structure was very similar to that of pepsin-solubilized **collagen** from edible **jellyfish** mesogloea, but it was different from those of the **collagen** from edible **jellyfish** exumbrella and the acid-soluble **collagen** from its mesogloea. The denaturation temperature (Td) of 28.8degreeC. This **collagen** contained a large amount of a fourth subunit that was provisionally designated alpha4. This **collagen** may have the chain composition of an alphalalpha2alpha3alpha4 heterotetramer.

CC Invertebrata: comparative, experimental morphology, physiology and pathology - Cnidaria 64008
Biochemistry studies - General 10060
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Bioengineering 10511
Food technology - General and methods 13502
IT Major Concepts
Biochemistry and Molecular Biophysics; Biomaterials; Foods
IT Parts, Structures, & Systems of Organisms
mesogloea
IT Chemicals & Biochemicals
collagen: characterization, industrial uses, isolation
IT Miscellaneous Descriptors
food chemistry
ORGN Classifier
Cnidaria 41000
Super Taxa

Invertebrata; Animalia
Organism Name
Rhopilema asamushi: rhizostomous **jellyfish** species
Taxa Notes
Animals, Invertebrates

L32 ANSWER 17 OF 41 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 5
ACCESSION NUMBER: 1999:250516 BIOSIS
DOCUMENT NUMBER: PREV199900250516
TITLE: **Collagen** of edible **jellyfish** exumbrella.
AUTHOR(S): Nagai, Takeshi [Reprint author]; Ogawa, Tomoe; Nakamura, Takashi; Ito, Tatsumi; Nakagawa, Hisaki; Fujiki, Kazuhiro; Nakao, Miki; Yano, Tomoki
CORPORATE SOURCE: Laboratory of Marine Biochemistry, Faculty of Agriculture, Kyushu University, Fukuoka, 812-8581, Japan
SOURCE: Journal of the Science of Food and Agriculture, (May 1, 1999) Vol. 79, No. 6, pp. 855-858. print.
CODEN: JSFAAE. ISSN: 0022-5142.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 2 Jul 1999
Last Updated on STN: 2 Jul 1999
AB The edible **jellyfish** exumbrella **collagen** was prepared by limited pepsin digestion. The yield of **collagen** was very high; 46.4% on the basis of lyophilised dry weight. This **collagen** was comprised of alpha1alpha2alpha3-heterotrimers, moreover it was relatively stable at 26.0 degreeC for 60 min. Thus, the edible **jellyfish** exumbrella will have potential as an important **collagen** source for use in various industries and it is expected that the development thus so far unutilised resource will advance in the future.
CC Food technology - Fish and other marine and freshwater products 13522
Food technology - Evaluations of physical and chemical properties 13530
IT Major Concepts
Foods
IT Parts, Structures, & Systems of Organisms
exumbrella
IT Chemicals & Biochemicals
collagen: heterotrimers, stability
IT Methods & Equipment
limited pepsin digestion: isolation method
ORGN Classifier
Cnidaria 41000
Super Taxa
Invertebrata; Animalia
Organism Name
Stomolophus meleagris [edible **jellyfish**]
Taxa Notes
Animals, Invertebrates
RN 9001-75-6 (PEPSIN)

L32 ANSWER 18 OF 41 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 2000069155 MEDLINE
DOCUMENT NUMBER: 20069155 PubMed ID: 10600239
TITLE: Scyphozoan **jellyfish**'s mesoglea supports

attachment, spreading and migration of anthozoans' cells in vitro.
AUTHOR: Frank U; Rinkevich B
CORPORATE SOURCE: The National Institute of Oceanography, Israel Oceanographic and Limnological Research, Haifa, 31080, Israel.. frank@www.zoo.uni-heidelberg.de
SOURCE: CELL BIOLOGY INTERNATIONAL, (1999) 23 (4) 307-11. Journal code: 9307129. ISSN: 1065-6995.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000209
Last Updated on STN: 20000209
Entered Medline: 20000201

AB Mechanically and enzymatically dissociated cells from five anthozoan species were laid on seven substrates in vitro. Cells were taken from two sea anemones (Aiptasia sp. and Anemonia sulcata), a scleractinian coral (Stylophora pistillata) and two alcyonacean corals (Heteroxenia fuscescence and Nephthea sp). Substrates tested: glass (coverslips), plastic (uncoated tissue culture plates), type IV **collagen**, gelatin, fibronectin, mesoglea pieces from the scyphozoan **jellyfish** Rhopilema nomadica and acetic acid extract of **jellyfish** mesoglea. Except for the mesoglea pieces, cells did not respond to any one of the other substrates, retaining their rounded shape. Following contact with mesoglea pieces, cells attached and spread. Subsequently they migrated into the mesogleal matrix at a rate of 5-10 microm/h during the first 2-5 h. No difference was found between the behavior of cells from the five different cnidarian species.

CT Check Tags: Animal; Support, Non-U.S. Gov't
Acetic Acid: ME, metabolism
Cell Adhesion: PH, physiology
Cell Extracts: CH, chemistry
Cnidaria: CY, cytology
Cnidaria: PH, physiology
Collagen: ME, metabolism
*Extracellular Matrix: PH, physiology
Fibronectins: ME, metabolism
Gelatin: ME, metabolism
Glass
Plastics
Scyphozoa: CY, cytology
*Scyphozoa: PH, physiology
Sea Anemones: CY, cytology
Sea Anemones: PH, physiology

RN 64-19-7 (Acetic Acid); 9000-70-8 (Gelatin); **9007-34-5 (Collagen)**
CN 0 (Cell Extracts); 0 (Fibronectins); 0 (Glass); 0 (Plastics)

L32 ANSWER 19 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:98076 HCAPLUS
DOCUMENT NUMBER: 128:172096
TITLE: Invertebrate type V telopeptide **collagen**, methods of making, and use thereof
INVENTOR(S): Wolfinbarger, Lloyd
PATENT ASSIGNEE(S): Bioscience Consultants, USA

SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5714582	A	19980203	US 1995-405979	19950317
US 6337389	B1	20020108	US 1997-959272	19971028
US 2002147154	A1	20021010	US 2001-999262	20011128

PRIORITY APPLN. INFO.: US 1995-405979 A2 19950317
US 2001-959272 A1 20011019

AB This invention relates to a method and process for the production of collagen prepns. from marine invertebrates such as scyphozoans (jellyfish) and compns. for these prepns. The collagen preparation includes telopeptide and atelopeptide fibrillar collagen of essentially invertebrate type V collagen. The collagen prepns. may be used in a variety of medical, dental, cell culture, and food applications.

IC ICM A61K038-17
ICS C07K001-00; A23J001-02
NCL 530356000
CC 63-3 (Pharmaceuticals)
Section cross-reference(s): 1, 9, 17
ST invertebrate type V telopeptide **collagen** prepn
IT Cnidarian (Cnidaria)
Crosslinking
Freeze drying
Invertebrate
Scyphozoa
Stomolophus meleagris
(invertebrate type V telopeptide **collagen**, methods of making, and use thereof)
IT Alkali metal halides, uses
Salts, uses
RL: NUU (Other use, unclassified); USES (Uses)
(invertebrate type V telopeptide **collagen**, methods of making, and use thereof)
IT Medical goods
(sponges; invertebrate type V telopeptide **collagen**, methods of making, and use thereof)
IT **Collagens**, biological studies
RL: BPN (Biosynthetic preparation); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(type V; invertebrate type V telopeptide **collagen**, methods of making, and use thereof)
IT 50-21-5, Lactic acid, uses 64-19-7, Acetic acid, uses 77-92-9, Citric acid, uses 79-09-4, Propionic acid, uses 110-94-1, Glutaric acid 6915-15-7, Malic acid 7647-01-0, Hydrochloric acid, uses
RL: NUU (Other use, unclassified); USES (Uses)
(invertebrate type V telopeptide **collagen**, methods of making, and use thereof)

REFERENCE COUNT: 75 THERE ARE 75 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 20 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:217304 HCAPLUS
DOCUMENT NUMBER: 128:294212
TITLE: Processed **jellyfish** with good appearance and crispiness and processing method therefor
INVENTOR(S): Araita, Soichiro; Kaku, Sukeji; Nomoto, Joji; Yamauchi, Takashi
PATENT ASSIGNEE(S): Marutomo K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10084916	A2	19980407	JP 1996-240377	19960911
JP 3184770	B2	20010709		

PRIORITY APPLN. INFO.: JP 1996-240377 19960911
AB The method includes salt pickling jellyfish, impregnating whey protein into pickled jellyfish, heating at a condition that denatures collagen, but the whey protein, in the jellyfish, and cooling.
IC ICM A23L001-325
CC 17-7 (Food and Feed Chemistry)
ST processed **jellyfish** appearance crispiness
IT Food processing
Heating
Jellyfish
(processed **jellyfish** with good appearance and crispiness and processing method therefor)
IT Proteins, general, biological studies
RL: FFD (Food or feed use); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)
(processed **jellyfish** with good appearance and crispiness and processing method therefor)
IT **Collagens**, miscellaneous
RL: MSC (Miscellaneous)
(processed **jellyfish** with good appearance and crispiness and processing method therefor)
IT Denaturation
(protein, of **collagen**; processed **jellyfish** with good appearance and crispiness and processing method therefor)
IT Proteins, specific or class
RL: FFD (Food or feed use); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)
(whey; processed **jellyfish** with good appearance and crispiness and processing method therefor)

L32 ANSWER 21 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:547275 HCAPLUS
DOCUMENT NUMBER: 129:328469
TITLE: A toxin homology domain in an astacin-like metalloproteinase of the **jellyfish** Podocoryne carnea with a dual role in digestion and development
AUTHOR(S): Pan, Tair-Long; Groger, Hans; Schmid, Volker; Spring,

Jurg
CORPORATE SOURCE: Institute of Zoology, University of Basel, Basel, CH-4051, Switz.
SOURCE: Development Genes and Evolution (1998), 208(5), 259-266
CODEN: DGEVFT; ISSN: 0949-944X
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Metalloproteinases of the astacin family such as tolloid play major roles in animal morphogenesis. Cnidarians are thought to be evolutionary simple organisms and, therefore, a metalloproteinase from the marine hydrozoan P. carnea was analyzed to evaluate the role of this conserved gene family at the base of animal evolution. Surprisingly, the proteinase domain of Podocoryne PMP1 is more similar to human meprin than to HMP1 from another hydrozoan, the freshwater polyp Hydra vulgaris. However, PMP1 and HMP1 both contain a small C-terminal domain with 6 cysteines that distinguishes them from other astacin-like mols. Similar domains have been described only recently from sea anemone toxins specific for potassium channels. This toxin homol. (Tox1) domain is clearly distinct from EGF-like domains or other cysteine-rich modules and terminates with the characteristic pattern CXXXCXXC with 3 out of 6 cysteines in the last 8 residues of the protein. PMP1 is transiently expressed at various sites of morphogenetic activity during medusa bud development. In the adult medusa, however, expression is concentrated to the manubrium, the feeding organ, where the PMP1 gene is highly induced upon feeding. These disparate expression patterns suggest a dual role of PMP1 comparable to tolloid in development and, like astacin in the crayfish, also for food digestion. The Tox1 domain of PMP1 could serve as a toxin to keep the pray paralyzed after ingestion, but as a sequence module such Tox1 domains with 6 cysteines are neither restricted to cnidarians nor to toxins.
CC 12-3 (Nonmammalian Biochemistry)
Section cross-reference(s): 3, 6, 7
ST astacin **jellyfish** digestion development; sequence metalloproteinase Podocoryne
IT Gene, animal
RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(PMP1; astacin-like metalloproteinase of **jellyfish** sequence and role in digestion and development)
IT Gene, animal
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(SMC2orf; astacin-like metalloproteinase of **jellyfish** sequence and role in digestion and development)
IT Development, nonmammalian postembryonic
Digestion, biological
Feeding
Podocoryne carnea
Protein sequences
cDNA sequences
(astacin-like metalloproteinase of **jellyfish** sequence and role in digestion and development)
IT **Collagens**, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)

(astacin-like metalloproteinase of **jellyfish** sequence and role in digestion and development)

IT Gene, animal
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(colF1; astacin-like metalloproteinase of **jellyfish** sequence and role in digestion and development)

IT Proteins, specific or class
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(gene SMC2orf; astacin-like metalloproteinase of **jellyfish** sequence and role in digestion and development)

IT 215112-11-1
RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(amino acid sequence; astacin-like metalloproteinase of **jellyfish** sequence and role in digestion and development)

IT 215112-12-2 215112-13-3
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(amino acid sequence; astacin-like metalloproteinase of **jellyfish** sequence and role in digestion and development)

IT 143179-21-9, Astacin
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(astacin-like metalloproteinase of **jellyfish** sequence and role in digestion and development)

IT 208628-76-6, GenBank AJ005052 211857-02-2, GenBank AJ009690
211857-03-3, GenBank AJ009691
RL: PRP (Properties)
(nucleotide sequence; astacin-like metalloproteinase of **jellyfish** sequence and role in digestion and development)

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 22 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:28663 HCAPLUS
DOCUMENT NUMBER: 128:93180
TITLE: Water-soluble organ extracts with improved biochemical effectiveness
INVENTOR(S): Riemschneider, Randolph
PATENT ASSIGNEE(S): Riemschneider, Randolph, Germany
SOURCE: PCT Int. Appl., 129 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9748404	A1	19971224	WO 1997-EP3214	19970619

W: CN, JP, KR, US
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

DE 19624476 A1 19980102 DE 1996-19624476 19960619
DE 19624476 C2 20010104
CH 692408 A 20020614 CH 1996-1644 19960619
PRIORITY APPLN. INFO.: DE 1996-19624476 A 19960619
AB Diluted organ exts. with improved biochem. effectiveness are taken from cell lines from the resp. organs of animals or parts of plants for use individually or in combination with other exts. in pharmaceutical, cosmetic, and other compns. These exts. are free of pathogens and immunogens, but contain all active components present in exts. of whole organs. Thus, bovine kidney MDBK cells free of bovine diarrhea virus were cultured in Dulbecco's minimal essential medium under 5% CO2 for 2-3 days, the medium was decanted, and the cells were washed, dissociated with trypsin/EDTA, deposited on a set of parallel Ti plates arranged in a perfusion system, incubated with culture medium to the desired cell d., and harvested by replacing the growth medium with a trypsin solution The cells were then washed, ground in a colloid mill, and extracted with Et2O, and the extract was centrifuged, filtered, and dialyzed against 0.3% aqueous Nipagin solution to produce a protein-free and a protein-containing beef kidney extract
IC ICM A61K035-23
ICS A61K035-50; A61K035-26; A61K035-78; A61K007-48
CC 63-3 (Pharmaceuticals)
Section cross-reference(s): 62
IT Caviar
Jellyfish
(extract, substitute for; water-soluble organ exts. with improved biochem. effectiveness)
IT **Collagens**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(hydroxyproline-containing plant extract as substitute for; water-soluble organ exts. with improved biochem. effectiveness)
IT 51-35-4, Hydroxyproline
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(plant extract containing, as **collagen** substitute; water-soluble organ exts. with improved biochem. effectiveness)

L32 ANSWER 23 OF 41 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 7
ACCESSION NUMBER: 1997:392923 BIOSIS
DOCUMENT NUMBER: PREV199799692126
TITLE: Differential scanning calorimetry of several **jellyfish** mesogloea.
AUTHOR(S): Nagai, Takeshi [Reprint author]; Hamada, Moritsugu; Kai, Norihisa; Tanoue, Yasuhiro; Nagayama, Fumio
CORPORATE SOURCE: Dep. Food Sci. Technol., Natl. Fisheries Univ., Shimonoseki, Yamaguchi 759-65, Japan
SOURCE: Fisheries Science (Tokyo), (1997) Vol. 63, No. 3, pp. 459-461.
ISSN: 0919-9268.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 10 Sep 1997
Last Updated on STN: 10 Sep 1997
AB Thermal properties of several **jellyfish** mesogloea were studied

using the differential scanning calorimeter. As a result, the three endothermic peaks were shown for many **jellyfish**. The first, second, and third peak corresponded to myosin, sarcoplasmic proteins and/or **collagen**, and actin. Each transition temperature (Tm) in **jellyfish** were lower than those in mammals. Although the three endothermic peaks were shown for hydrozoan **jellyfish**, the highest Tm were lower than the lowest one for the other **jellyfish** . Only two peaks were shown for cubic **jellyfish**. It was suggested that the first and second peak corresponded to sarcoplasmic protein and/or **collagen** and actin. Moreover, it did not related between the water temperature in the sampling occasion and the denaturation temperature of each protein in **jellyfish**.

CC Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Molecular properties and macromolecules 10506
External effects - Temperature as a primary variable 10614
Invertebrata: comparative, experimental morphology, physiology and pathology - Cnidaria 64008

IT Major Concepts
Biochemistry and Molecular Biophysics; Physiology

IT Chemicals & Biochemicals
ACTIN

IT Miscellaneous Descriptors
ACTIN; ANALYTICAL METHOD; **COLLAGEN**; DIFFERENTIAL SCANNING CALORIMETRY; MESOGLEA; METHODOLOGY; MYOSIN; SARCOPLASMIC PROTEIN; WATER TEMPERATURE

RN 132579-20-5 (ACTIN)

L32 ANSWER 24 OF 41 MEDLINE on STN DUPLICATE 8
ACCESSION NUMBER: 96292011 MEDLINE
DOCUMENT NUMBER: 96292011 PubMed ID: 8653581
TITLE: The evolution of fibrillar **collagens**: a sea-pen **collagen** shares common features with vertebrate type V **collagen**.
AUTHOR: Tillet E; Franc J M; Franc S; Garrone R
CORPORATE SOURCE: Institut de Biologie et Chimie des Proteines, Lyon, France.
SOURCE: COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY. PART B, BIOCHEMISTRY AND MOLECULAR BIOLOGY, (1996 Feb) 113 (2) 239-46.
Journal code: 9516061. ISSN: 1096-4959.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199607
ENTRY DATE: Entered STN: 19960808
Last Updated on STN: 19960808
Entered Medline: 19960730

AB The extracellular matrix of marine primitive invertebrates (sponges, polyps and **jellyfishes**) contains **collagen** fibrils with narrow diameters. From various data, it has been hypothesized that these primitive **collagens** could represent ancestral forms of the vertebrate minor **collagens**, i.e., types V or XI. Recently we have isolated a primitive **collagen** from the soft tissues of the sea-pen Veretillum cynomorium. This report examines whether the sea-pen **collagen** shares some features with vertebrate type V **collagen**. Rotary shadowed images of acid-soluble **collagen** molecules extracted from beta-APN treated animals, positive staining of

segment-long-spacing crystallites precipitated from pepsinized **collagen**, Western blots of the pepsinized alpha1 and alpha2 chains with antibodies to vertebrate types I, III and V **collagens**, and in situ gold immunolabeling of ECM **collagen** fibrils were examined. Our results showed that the tissue form of the sea-pen **collagen** is a 340-nm threadlike molecule, which is close to the vertebrate type V **collagen** with its voluminous terminal globular domain, the distribution of most of its polar amino-acid residues, and its antigenic properties.

CT Check Tags: Animal; Female; Human
Amino Acid Sequence
Antibodies
***Collagen: CH, chemistry**
Collagen: IP, isolation & purification
Collagen: UL, ultrastructure
Microscopy, Electron
Microscopy, Immunoelectron
Molecular Sequence Data
Pepsin A
Peptide Fragments: CH, chemistry
Peptide Fragments: IP, isolation & purification
Placenta: CH, chemistry
Pregnancy
Rats
*Squid: CH, chemistry
Vertebrates

RN **9007-34-5 (Collagen)**
CN 0 (Antibodies); 0 (Peptide Fragments); EC 3.4.23.1 (Pepsin A)

L32 ANSWER 25 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:842558 HCAPLUS
DOCUMENT NUMBER: 123:237525
TITLE: Method for preparing **collagen** from cnidarians, and resulting cosmetic compositions
INVENTOR(S): Ranson, Michele; David, Marc
PATENT ASSIGNEE(S): Javenech, Fr.
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9517428	A1	19950629	WO 1994-FR1494	19941220
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
FR 2714063	A1	19950623	FR 1993-15318	19931220
FR 2714063	B1	19960308		
EP 808332	A1	19971126	EP 1995-904572	19941220
EP 808332	B1	20000524		
R: BE, CH, DE, DK, ES, GB, IT, LI, NL, SE				
ES 2148481	T3	20001016	ES 1995-904572	19941220

PRIORITY APPLN. INFO.: FR 1993-15318 A 19931220
WO 1994-FR1494 W 19941220

AB A method for preparing collagen by washing cnidarians, particularly

pre-frozen and pre-crushed jellyfish, and subjecting them to acid extraction, centrifugation and saline precipitation Collagen with an amino acid composition including less than 7% alanine and at least 0.5% cystine is thereby obtained. Collagen comprising 1.01% cysteine, and 4.45% alanine was prepared according to above method. Formulations of cosmetic emulsions containing above collagens are disclosed.

IC ICM C07K014-78
ICS A61K007-48

CC 62-4 (Essential Oils and Cosmetics)
Section cross-reference(s): 9

ST **collagen** prepn cnidarian cosmetic pharmaceutical; **jellyfish collagen** prepn cosmetic pharmaceutical

IT Coelenterate
Cosmetics
Jellyfish
Pharmaceutical dosage forms
Rhizostoma pulmo
Scyphozoa
(preparation of **collagen** from cnidarians for cosmetic and pharmaceutical compns.)

IT Amino acids, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(preparation of **collagen** from cnidarians for cosmetic and pharmaceutical compns.)

IT **Collagens**, biological studies
RL: BUU (Biological use, unclassified); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of **collagen** from cnidarians for cosmetic and pharmaceutical compns.)

IT Cosmetics
(creams, preparation of **collagen** from cnidarians for cosmetic and pharmaceutical compns.)

IT Cosmetics
(emulsions, preparation of **collagen** from cnidarians for cosmetic and pharmaceutical compns.)

IT Cosmetics
(gels, preparation of **collagen** from cnidarians for cosmetic and pharmaceutical compns.)

IT 52-90-4, Cysteine, biological studies 56-41-7, Alanine, biological studies 1190-94-9
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(preparation of **collagen** from cnidarians for cosmetic and pharmaceutical compns.)

L32 ANSWER 26 OF 41 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1995:242365 BIOSIS
DOCUMENT NUMBER: PREV199598256665
TITLE: Differential expression of a metalloprotease in striated muscle transdifferentiation of **jellyfish**.
AUTHOR(S): Pan, Tair-Long; Schmid, Volker; Spring, Jurg
CORPORATE SOURCE: Zool. Inst., Univ. Basel, Rheinsprung 9, CH-4051 Basel, Switzerland
SOURCE: Experientia (Basel), (1995) Vol. 51, No. ABSTR., pp. A63.

Meeting Info.: 27th Annual Meeting of the Swiss Societies for Experimental Biology (USGEB/USSBE). Fribourg, Switzerland. March 30-31, 1995.
CODEN: EXPEAM. ISSN: 0014-4754.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Jun 1995
Last Updated on STN: 9 Jun 1995
CC General biology - Symposia, transactions and proceedings 00520
Cytology - Animal 02506
Genetics - Animal 03506
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Minerals 10069
Enzymes - Physiological studies 10808
Muscle - Physiology and biochemistry 17504
Invertebrata: comparative, experimental morphology, physiology and pathology - Cnidaria 64008
IT Major Concepts
Enzymology (Biochemistry and Molecular Biophysics); Genetics; Muscular System (Movement and Support); Physiology
IT Chemicals & Biochemicals
METALLOPROTEASE; ZINC; **COLLAGENASE**
IT Miscellaneous Descriptors
COLLAGENASE; COMPLEMENTARY DNA; MEETING ABSTRACT; MESSENGER RNA; POLYMERASE CHAIN REACTION; ZINC
ORGN Classifier
Cnidaria 41000
Super Taxa
Invertebrata; Animalia
Organism Name
Podocoryne carnea
Taxa Notes
Animals, Invertebrates
RN 81669-70-7 (METALLOPROTEASE)
7440-66-6 (ZINC)
9001-12-1 (**COLLAGENASE**)

L32 ANSWER 27 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:525183 HCAPLUS
DOCUMENT NUMBER: 119:125183
TITLE: Aqueous synthetic organ extracts
PATENT ASSIGNEE(S): Schuelke und Mayr G.m.b.H., Germany
SOURCE: Ger. Offen., 23 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4139639	A1	19930603	DE 1991-4139639	19911202
WO 9310802	A1	19930610	WO 1992-DE1028	19921202
W: JP, US				
EP 552516	A1	19930728	EP 1992-250349	19921202

R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE
JP 06506000 T2 19940707 JP 1993-509719 19921202
PRIORITY APPLN. INFO.: DE 1991-4139639 19911202
DE 1992-4227633 19920818
WO 1992-DE1028 19921202

AB Aqueous synthetic organ exts. are prepared which have an activity spectrum comparable to that of the corresponding natural organ extract, but without the side effects due to the presence of pathogen or virus proteins, protein degradation products, and hormones. The synthetic exts. contain amino acids, peptides, nucleotides, carbohydrates, C3-6 aliphatic carboxylic acids, C2-7 aliphatic and/or aromatic alcs., and optionally vitamins, mineral salts and/or trace elements, buffers, and preservatives. Prepns. of synthetic placenta, serum, spleen, thymus, and connective tissue exts. and collagen hydrolyzate are cited as examples. The exts. are useful in cosmetics, to stimulate wound healing, immunity, and cell metabolism, and for treatment of digestive tract disorders, especially ulcers.

IC ICM C07K015-06
ICS C07K003-02; A61K035-16; A61K035-50; A61K037-02

CC 63-3 (Pharmaceuticals)
Section cross-reference(s): 62

IT Amniotic fluid
Blood
Caviar
Connective tissue
Jellyfish
Mammary gland
Organ
Placenta
Spleen
Thymus gland
Collagens, biological studies
RL: BIOL (Biological study)
(exts., aqueous, synthetic, for cosmetics and pharmaceuticals)

L32 ANSWER 28 OF 41 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 92111563 MEDLINE
DOCUMENT NUMBER: 92111563 PubMed ID: 1730224
TITLE: Characterization of heterotrimeric **collagen** molecules in a sea-pen (Cnidaria, Octocorallia).
AUTHOR: Tillet-Barret E; Franc J M; Franc S; Garrone R
CORPORATE SOURCE: Laboratoire de Cytologie Moleculaire, CNRS UPR 412, Universite Claude Bernard, Villeurbanne, France.
SOURCE: EUROPEAN JOURNAL OF BIOCHEMISTRY, (1992 Jan 15) 203 (1-2) 179-84.
Journal code: 0107600. ISSN: 0014-2956.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199202
ENTRY DATE: Entered STN: 19920308
Last Updated on STN: 19920308
Entered Medline: 19920219

AB The **collagen** of a primitive invertebrate, the sea-pen Veretillum Cnidaria, Octocorallia), was studied with respect to its molecular-chain composition. The soft extracellular tissues (mesoglea) were solubilized by limited pepsin proteolysis and the **collagen** was isolated by

selective precipitation at 0.7 M NaCl under acidic conditions. The pepsinized molecules were 260 nm in length, as demonstrated by electron microscope studies of rotary-shadowed molecules and of the segment-long-spacing crystallites obtained by dialysis against ATP. SDS/PAGE of the extract produced two main bands susceptible to bacterial **collagenase**, designated as the alpha 1 and alpha 2 chain, which were differentiated clearly by their CNBr cleavage products and the higher glycosylation rate of the alpha 2 chain. The latter finding corresponds with the high hydroxylysine content of the alpha 2 chain. The alpha 1/alpha 2 chain ratio observed in SDS/PAGE and the fact that only one peak was obtained by concanavalin-A affinity chromatography of a non-denatured 0.7 M NaCl extract demonstrate the alpha 1 [alpha 2]2 molecular structure of this **collagen**. These results contrast with data on the structure of other coelenterates (i.e. [alpha]3 for sea anemone **collagen** molecules and alpha 1 alpha 2 alpha 3 for **jellyfish collagen** molecules). They are discussed in relation to the evolution of **collagen**.

CT Check Tags: Animal
Amino Acids: AN, analysis
Chromatography, Affinity
Chromatography, High Pressure Liquid
***Collagen: CH, chemistry**
Collagen: UL, ultrastructure
Cyanogen Bromide
Electrophoresis, Polyacrylamide Gel
*Hydra: CH, chemistry
Microscopy, Electron
Pepsin A: CH, chemistry

RN 506-68-3 (Cyanogen Bromide); **9007-34-5 (Collagen)**
CN 0 (Amino Acids); EC 3.4.23.1 (Pepsin A)

L32 ANSWER 29 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1991:534631 HCAPLUS
DOCUMENT NUMBER: 115:134631
TITLE: **Jellyfish**-like foods and their manufacture from **collagens**
INVENTOR(S): Nomura, Satoshi; Hayade, Takeshi; Fujimoto, Toshio
PATENT ASSIGNEE(S): Nippi Collagen Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03061451	A2	19910318	JP 1990-33455	19900214
JP 2854914	B2	19990210		

PRIORITY APPLN. INFO.: JP 1989-73250 19890324

AB Aqueous collagen dispersions are formed into sheets and the sheets are concentrated (dehydrated), hardened (crosslinked), and passed through hot water to manufacture jellyfish-like foods. Insol. collagen of cowhide was treated with protease at pH 3.0, neutralized, centrifuged, and the collected collagen fibers were mixed with lactic acid to pH 3.0 to manufacture an aqueous 5% solubilized collagen solution The solution was defoamed and extruded into saturated

aqueous NaCl solution to give .apprx.1.5-1.8 mm-thick sheets, which were crosslinked by aqueous alum, treated with aqueous glucose, dried, heated at 80° for 5 h, treated with H2O at 100° for 60 s, and cooled to manufacture .apprx.1.7-2.5 mm-thick pale yellow jellyfish-like food.

IC ICM A23J003-04
ICS A23J003-00; A23L001-312

CC 17-7 (Food and Feed Chemistry)

ST **jellyfish** like food **collagen**

IT Gelatins, biological studies
RL: BIOL (Biological study)
(**jellyfish**-like foods containing alginic acid salts and)

IT **Jellyfish**
(substitutes, **collagen** modification for manufacture of)

IT **Collagens**, compounds
RL: BIOL (Biological study)
(hydrolyzates, crosslinked, **jellyfish**-like foods containing)

IT 9005-38-3, Sodium alginate
RL: BIOL (Biological study)
(**jellyfish**-like foods manufacture from aqueous **collagens** and)

L32 ANSWER 30 OF 41 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

ACCESSION NUMBER: 1992:226365 BIOSIS
DOCUMENT NUMBER: PREV199242107865; BR42:107865
TITLE: **COLLAGENS** OF **JELLYFISH** AURELIA-AURITA.
AUTHOR(S): SATO A [Reprint author]; SHIMIZU K; KINOSHITA T; YOSHIZATO K
CORPORATE SOURCE: MOL CELL SCI LAB, ZOOL INST, FAC SCI, HIROSHIMA UNIV, HIROSHIMA
SOURCE: Zoological Science (Tokyo), (1991) Vol. 8, No. 6, pp. 1133. Meeting Info.: SIXTY-SECOND ANNUAL MEETING OF THE ZOOLOGICAL SOCIETY OF JAPAN, OKAYAMA, JAPAN, OCTOBER 13-15, 1991. ZOOL SCI (TOKYO). CODEN: ZOSCEX. ISSN: 0289-0003.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 5 May 1992
Last Updated on STN: 5 May 1992

CC General biology - Symposia, transactions and proceedings 00520
Cytology - Animal 02506
Comparative biochemistry 10010
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Molecular properties and macromolecules 10506
Bones, joints, fasciae, connective and adipose tissue - Physiology and biochemistry 18004
Invertebrata: comparative, experimental morphology, physiology and pathology - Cnidaria 64008

IT Major Concepts
Biochemistry and Molecular Biophysics; Cell Biology; Physiology; Skeletal System (Movement and Support)

IT Miscellaneous Descriptors
ABSTRACT BIOCHEMICAL PROPERTIES IMMUNOLOGIC CROSS-REACTIVITY ENDODERM ECTODERM MESOGLEA

ORGN Classifier
Cnidaria 41000
Super Taxa

Invertebrata; Animalia
Taxa Notes
Animals, Invertebrates

L32 ANSWER 31 OF 41 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 10
ACCESSION NUMBER: 1992:110007 BIOSIS
DOCUMENT NUMBER: PREV199242050007; BR42:50007
TITLE: THE EXTRACELLULAR MATRIX MESOGLEA OF HYDROZOAN **JELLYFISH** AND ITS ABILITY TO SUPPORT CELL ADHESION AND SPREADING.
AUTHOR(S): SCHMID V [Reprint author]; BALLY A; BECK K; HALLER M; SCHLAGE W K; WEBER C
CORPORATE SOURCE: INST ZOOL, RHEINSPRUNG 9, CH-4051 BASEL, SWITZ
SOURCE: Hydrobiologia, (1991) Vol. 216-217, pp. 3-10.
Meeting Info.: FIFTH INTERNATIONAL CONFERENCE ON COELENTERATE BIOLOGY, SOUTHAMPTON, ENGLAND, UK, JULY 10-14, 1989. HYDROBIOLOGIA.
CODEN: HYDRB8. ISSN: 0018-8158.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 24 Feb 1992
Last Updated on STN: 24 Feb 1992
CC General biology - Symposia, transactions and proceedings 00520
Comparative biochemistry 10010
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Molecular properties and macromolecules 10506
Anatomy and Histology - Comparative anatomy 11103
Anatomy and Histology - Microscopic and ultramicroscopic anatomy 11108
Invertebrata: general and systematic - Cnidaria 63508
Invertebrata: comparative, experimental morphology, physiology and pathology - Cnidaria 64008
IT Major Concepts
Biochemistry and Molecular Biophysics; Morphology; Physiology; Systematics and Taxonomy
IT Miscellaneous Descriptors
VERTEBRATE **COLLAGEN** LAMININ FIBRONECTIN MESOGLEA SYSTEMATICS
ORGN Classifier
Cnidaria 41000
Super Taxa
Invertebrata; Animalia
Taxa Notes
Animals, Invertebrates
ORGN Classifier
Vertebrata 85150
Super Taxa
Chordata; Animalia
Taxa Notes
Animals, Chordates, Nonhuman Vertebrates, Vertebrates

L32 ANSWER 32 OF 41 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1990:484622 HCAPLUS
DOCUMENT NUMBER: 113:84622
TITLE: Cosmetics containing solubilized **collagen** having helical α1, α2, and α3 chains
INVENTOR(S): Hamazaki, Taihei; Kimura, Shigeru

PATENT ASSIGNEE(S): Pola Chemical Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02115112	A2	19900427	JP 1988-265766	19881021

PRIORITY APPLN. INFO.: JP 1988-265766 19881021

AB Cosmetics, which have good moisturizing and skin-covering effects and are not sticky or tacky, contain solubilized collagen (sugar content ≥3 weight%) having helical α1, α2, and α3 chains. A skin emulsion was prepared from squalane 20.0, glycerin monostearate 1.5, polyethylene glycol monostearate 2.0, acetate buffer 76.42, and solubilized collagen [containing 9.6 weight% sugar, prepared by hydrolysis of Rhopilema esculenta (jellyfish) with pepsin] 0.08 part by weight

IC ICM A61K007-00
ICS A61K007-48; C07K015-20

CC 62-1 (Essential Oils and Cosmetics)

ST moisturizer **collagen jellyfish** cosmetic; Rhopilema **collagen** moisturizer cosmetic

IT Rhopilema esculenta
Stomolophus normurai
(**collagen** having helical α1 and α2 and α3 chains from, as moisturizer, cosmetics containing)

IT Cosmetics
Shampoos
(containing solubilized **collagen** having helical α1 and α2 and α3 chains from **jellyfish**, as moisturizer)

IT Hair preparations
(containing solubilized **collagen** having helical α1 and α2 and α3 chains **jellyfish**, as moisturizer)

IT **Collagens**, biological studies
RL: BIOL (Biological study)
(solubilized, having helical α1 and α2 and α3 chains, from **jellyfish**, as moisturizer, cosmetics containing)

L32 ANSWER 33 OF 41 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1989:245783 BIOSIS
DOCUMENT NUMBER: PREV198987126848; BA87:126848
TITLE: PRIMARY CULTURE OF IDENTIFIED NEURONS FROM A CNIDARIAN.
AUTHOR(S): PRZYSIEZNIAK J [Reprint author]; SPENCER A N
CORPORATE SOURCE: DEP ZOOLOGY, UNIV ALBERTA, EDMONTON, ALBERTA, T6G 2E9, CANADA
SOURCE: Journal of Experimental Biology, (1989) Vol. 142, pp. 97-114.
CODEN: JEBIAM. ISSN: 0022-0949.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 20 May 1989
Last Updated on STN: 20 May 1989

AB Several types of neurones were dissociated from the nerve-rings of the hydrozoan **jellyfish** Polyorchis penicillatus, using

collagenase digestion preceded, and if necessary followed, by removal of external divalent cations. The neurones were cultured for up to 2 weeks in artificial sea water, on a mesogloeal substratum. One subset of large neurones, the swimming motor neurones (SMNs; soma approx. 20 + 50 μm), exhibited distinct morphological features in vitro, such as large size, wide processes, clear cytoplasm and membranous inclusions around the nucleus. These neurones retained their characteristic action potential shape in culture, with spikes measuring 50 ± 11 mV (N = 18) in peak amplitude and 37 ± 11 ms in duration. SMNs could be labelled in vivo with carboxyfluorescein or Lucifer Yellow, subsequently dissociated, and identified in vitro. Two subsets of small neurones were also identifiable. One exhibited electrophysiological similarities with B system neurones, known to be presynaptic to the SMNs in vivo, showing a burstlike pattern of spikes of short duration (5 · 4 ± 1 · 4 ms; N = 6) and small amplitude (25 ± 7 mV). Another subset of small neurones could be labelled with antiserum against the carboxy-terminal peptide moiety, Arg-Phe-amide. Biophysical and neurotransmitter studies at the level of the single identified hydrozoan neurone will be easier in isolated cell culture. This approach will avoid problems encountered in studying the semidissected nerve-ring preparation.

CC Cytology - Animal 02506
Biochemistry studies - Minerals 10069
Biophysics - Membrane phenomena 10508
Metabolism - Minerals 13010
Tissue culture, apparatus, methods and media 32500
In vitro cellular and subcellular studies 32600
Invertebrata: comparative, experimental morphology, physiology and pathology - Cnidaria 64008

IT Major Concepts
Cell Biology; Membranes (Cell Biology); Metabolism; Physiology

IT Miscellaneous Descriptors
POLYORCHIS-PENICILLATUS DIVALENT CATION RING NERVE

ORGN Classifier
Cnidaria 41000

Super Taxa
Invertebrata; Animalia

Taxa Notes
Animals, Invertebrates

L32 ANSWER 34 OF 41 MEDLINE on STN DUPLICATE 11
ACCESSION NUMBER: 88329496 MEDLINE
DOCUMENT NUMBER: 88329496 PubMed ID: 2901374
TITLE: Species specificity in cell-substrate interactions in medusae.
AUTHOR: Schmid V; Bally A
CORPORATE SOURCE: Institute of Zoology, University of Basle, Switzerland.
SOURCE: DEVELOPMENTAL BIOLOGY, (1988 Oct) 129 (2) 573-81.
Journal code: 0372762. ISSN: 0012-1606.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198810
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19950206
Entered Medline: 19881027

AB A new system is described for the study of ECM-tissue interactions, using the ECM (called mesogloea) of various cnidarians and isolated striated muscle and endodermal tissue of **jellyfish**. The mesogloea consists mainly of water and **collagen**. It is present in all cnidarians and can be isolated without enzyme treatment. It can be used as a substrate to which cells and tissues adhere and on which they spread and migrate. Tissues of striated muscle and endoderm adhere and spread not only on mesogloea from regions they normally cover, but also from other regions of the animal. However, adhesion and spreading are highly species-specific. Species-specific adhesion is found throughout the whole mass of mesogloea even at regions where cells do not occur naturally. The cell adhesion factor can be extracted from the mesogloea so that the mesogloea no longer shows any cell adhesion properties. The extract consists mainly of a cysteine-containing **collagen**.

CT Check Tags: Animal; Support, Non-U.S. Gov't
Cell Adhesion
Cell Movement
*Cnidaria: PH, physiology
*Extracellular Matrix: PH, physiology
Muscles: CY, cytology
Scyphozoa: CY, cytology
*Scyphozoa: PH, physiology
Species Specificity
Tissue Extracts

CN 0 (Tissue Extracts)

L32 ANSWER 35 OF 41 MEDLINE on STN DUPLICATE 12
ACCESSION NUMBER: 86236448 MEDLINE
DOCUMENT NUMBER: 86236448 PubMed ID: 2872737
TITLE: Platelet aggregation caused by a partially purified **jellyfish** toxin from Carybdea rastonii.
AUTHOR: Azuma H; Sekizaki S; Satoh A; Nakajima T; Ishikawa M
SOURCE: TOXICON, (1986) 24 (5) 489-99.
Journal code: 1307333. ISSN: 0041-0101.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198607
ENTRY DATE: Entered STN: 19900321
Last Updated on STN: 19950206
Entered Medline: 19860716

AB A partially purified toxin (pCrTX) was obtained from the tentacles of the **jellyfish**, Carybdea rastonii. When pCrTX (3 X 10(-8) - 3 X 10(-7) g/ml) was added to citrated platelet-rich plasma, aggregation was produced in a concentration-dependent manner. Scanning electron microscopic examination revealed that both pCrTX and **collagen** produced aggregates of platelets possessing many pseudopods. The concentration which produced 50% aggregation for pCrTX was 1.8 X 10(-7) g/ml, as compared to 2.3 X 10(-6) g/ml for **collagen**. The pCrTX-induced aggregation was only slightly inhibited by indomethacin and quinacrine in concentrations sufficient to inhibit arachidonic acid- and **collagen**-induced aggregation. pCrTX was less active in washed platelets suspended in Ca2+ free medium, whereas the pCrTX-induced aggregation was significantly augmented in the presence of Ca2+. The augmentation of aggregation by Ca2+ was only slightly attenuated by pretreatment with 100 microM verapamil. pCrTX significantly increased the

concentration of cytoplasmic free Ca2+ ([Ca2+]i) and depolarized the platelet membrane in concentrations that produced aggregation. The increase in [Ca2+]i caused by pCrTX was little affected by verapamil. The depolarization by pCrTX was unchanged in the presence or absence of Ca2+, or by sodium or potassium transport inhibitors. The movement of 22Na+ into platelets was significantly increased by pCrTX. This increase in the movement of 22N+ into platelets was unaffected by tetrodotoxin. On the other hand, pCrTX-induced aggregation, depolarization and the increase in [Ca2+]i were all significantly attenuated in low Na+ medium. These results suggest that pCrTX causes a massive depolarization by increasing cation permeability indiscriminately and this generalized depolarization permits an inward movement of calcium down an electrochemical gradient which, in turn triggers platelet aggregation.

CT Check Tags: Animal; Comparative Study; In Vitro
Blood Platelets: ME, metabolism
Blood Platelets: UL, ultrastructure
Calcium: BL, blood
Cnidarian Venoms: AI, antagonists & inhibitors
Cnidarian Venoms: IP, isolation & purification
*Cnidarian Venoms: PD, pharmacology
Collagen: PD, pharmacology
Cytoplasm: ME, metabolism
Membrane Potentials: DE, drug effects
Microscopy, Electron, Scanning
*Platelet Aggregation: DE, drug effects
Rabbits
Scyphozoa

RN 7440-70-2 (Calcium); **9007-34-5 (Collagen)**
CN 0 (Cnidarian Venoms)

L32 ANSWER 36 OF 41 MEDLINE on STN DUPLICATE 13
ACCESSION NUMBER: 86177606 MEDLINE
DOCUMENT NUMBER: 86177606 PubMed ID: 2870502
TITLE: Platelet aggregation caused by Carybdea rastonii toxins (CrTX-I, II and III) obtained from a **jellyfish**, Carybdea rastonii.
AUTHOR: Azuma H; Sekizaki S; Satoh A; Nakajima T
SOURCE: PROCEEDINGS OF THE SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE, (1986 May) 182 (1) 34-42.
Journal code: 7505892. ISSN: 0037-9727.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198605
ENTRY DATE: Entered STN: 19900321
Last Updated on STN: 19950206
Entered Medline: 19860516

AB The pharmacological mechanisms of platelet aggregation induced by highly toxic proteins (CrTX-I, CrTX-II, and CrTX-III) obtained from tentacles of a **jellyfish**, Carybdea rastonii, were investigated. When the partially purified toxin (pCrTX) and CrTXs were added to the citrated platelet-rich plasma (PRP), aggregation was produced in a concentration-dependent manner. The activity of CrTXs was approximately 100 times more potent than pCrTX. The CrTXs-induced aggregation was little affected by indomethacin and quinacrine at concentrations sufficient to inhibit arachidonic acid- and **collagen**-induced

aggregation. The CrTXs-induced aggregation in washed platelets was significantly augmented in the presence of Ca2+. The pretreatment with verapamil failed to modify this augmentation of aggregation. The concentration of cytoplasmic-free calcium ([Ca2+]i) of platelets was increased by CrTXs at the same concentrations that produced aggregation. This effect of CrTXs was again little affected by verapamil. CrTXs at the same concentrations as those that produced aggregation and increased [Ca2+]i caused depolarization of platelets, which was unchanged after pretreatment with sodium or potassium transport inhibitors. CrTX-I significantly increased the 22Na flux into platelets and this effect of CrTX-I was unaffected by tetrodotoxin. The CrTX-I-induced aggregation, depolarization, and increase in [Ca2+]i were all significantly attenuated in the low Na+ medium. These results suggest that CrTXs cause a massive depolarization by increasing cation permeability and this generalized depolarization permits an inward movement of Ca2+ down its electrochemical gradient which, in turn, triggers platelet aggregation.

CT Check Tags: Animal
Blood Platelets: PH, physiology
Calcium: ME, metabolism
Cell Membrane: PH, physiology
Chromatography, Gel
Cnidarian Venoms: IP, isolation & purification
*Cnidarian Venoms: PD, pharmacology
Dose-Response Relationship, Drug
Indomethacin: PD, pharmacology
Membrane Potentials: DE, drug effects
*Platelet Aggregation: DE, drug effects
Quinacrine: PD, pharmacology
Rabbits
Scyphozoa
Sodium: ME, metabolism
Verapamil: PD, pharmacology

RN 52-53-9 (Verapamil); 53-86-1 (Indomethacin); 7440-23-5 (Sodium); 7440-70-2 (Calcium); 83-89-6 (Quinacrine)

CN 0 (Cnidarian Venoms)

L32 ANSWER 37 OF 41 MEDLINE on STN DUPLICATE 14

ACCESSION NUMBER: 86059393 MEDLINE
DOCUMENT NUMBER: 86059393 PubMed ID: 2866183
TITLE: **Jellyfish** mesogloea **collagen**. Characterization of molecules as alpha 1 alpha 2 alpha 3 heterotrimers.
AUTHOR: Miura S; Kimura S
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1985 Dec 5) 260 (28) 15352-6.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198601
ENTRY DATE: Entered STN: 19900321
Last Updated on STN: 19950206
Entered Medline: 19860103

AB The mesogloea **collagen** of a primitive animal, the **jellyfish Stomolophus** nomurai, belonging to the class Scyphozoa in the Coelenterata, was studied with respect to its chain

structure. Most of the mesogloea **collagen** was solubilized by limited digestion with pepsin and isolated by selective precipitation at 0.9 m NaCl in 0.5 M acetic acid. Upon denaturation, the pepsin-solubilized **collagen** produced three distinct alpha chains, alpha 1, alpha 2, and alpha 3, in comparable amounts which were separable by CM-cellulose chromatography. The nonidentity of these alpha chains was confirmed by amino acid and carbohydrate analyses and peptide mapping. Furthermore, the introduction of intramolecular cross-links into native molecules by formaldehyde yielded a large proportion of gamma 123 chain with chain structure alpha 1 alpha 2 alpha 3, as judged by chromatographic behavior and peptide maps. We concluded that mesogloea **collagen** is comprised of alpha 1 alpha 2 alpha 3 heterotrimers and is chemically like vertebrate Type V **collagen**. On the other hand, sea anemone mesogloea **collagen** from the class Anthozoa was previously reported to comprise (alpha)3 homotrimers (Katzman, R. L., and Kang, A. H. (1972) J. Biol. Chemical 247, 5486-5489). On the basis of these findings, we assume that alpha 1 alpha 2 alpha 3 heterotrimers arose in evolution with the divergence of Scyphozoa and Anthozoa.

CT Check Tags: Animal; Support, Non-U.S. Gov't
Amino Acids: AN, analysis
Carbohydrates: AN, analysis
Chromatography, Ion Exchange
*Cnidaria: AN, analysis
***Collagen: AN, analysis**
Cyanogen Bromide: PD, pharmacology
Electrophoresis, Polyacrylamide Gel
Macromolecular Systems
Pepsin A: ME, metabolism
Peptide Fragments: AN, analysis
*Scyphozoa: AN, analysis

RN 506-68-3 (Cyanogen Bromide); **9007-34-5 (Collagen)**

CN 0 (Amino Acids); 0 (Carbohydrates); 0 (Macromolecular Systems); 0 (Peptide Fragments); EC 3.4.23.1 (Pepsin A)

L32 ANSWER 38 OF 41 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 15

ACCESSION NUMBER: 1984:241915 BIOSIS
DOCUMENT NUMBER: PREV198477074899; BA77:74899
TITLE: **COLLAGEN** AS THE MAJOR EDIBLE COMPONENT OF **JELLYFISH STOMOLOPHUS**-NOMURAI.
AUTHOR(S): KIMURA S [Reprint author]; MIURA S; PARK Y-H
CORPORATE SOURCE: FOOD SCIENCE AND TECHNOL, TOKYO UNIV FISHERIES, KONAN 4, MINATAO-KU, TOKYO 108, JAPAN
SOURCE: Journal of Food Science, (1983) Vol. 48, No. 6, pp. 1758-1760.
CODEN: JFDSAZ. ISSN: 0022-1147.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB The mesogloea and skin of a common edible **jellyfish**, S. nomurai, were characterized with respect to amino acid composition and compared with a commercially salted **jellyfish**. Then the mesogloea was digested with pepsin at 3° C for 48 h, and its solubilized protein was isolated and subjected to biochemical analyses. These composite results showed that the major edible component of **jellyfish** was the connective tissue protein, **collagen**, characterized by its high content of hydroxylysine and its glycosides.

CC Ecology: environmental biology - Water research and fishery biology 07517
Comparative biochemistry 10010
Biochemistry methods - General 10050
Biochemistry studies - General 10060
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Carbohydrates 10068
Biochemistry studies - Minerals 10069
External effects - Temperature as a primary variable 10614
External effects - Temperature as a primary variable - cold 10616
Enzymes - Methods 10804
Food technology - Fish and other marine and freshwater products 13522
Food technology - Evaluations of physical and chemical properties 13530
Food technology - Preparation, processing and storage 13532
Bones, joints, fasciae, connective and adipose tissue - Physiology and biochemistry 18004
Integumentary system - Physiology and biochemistry 18504
Temperature - General measurement and methods 23001
Invertebrata: comparative, experimental morphology, physiology and pathology - Cnidaria 64008
Invertebrate body regions - Orifices, pores and cavities 64216
IT Major Concepts
Biochemistry and Molecular Biophysics; Foods; Physiology
IT Miscellaneous Descriptors
MESOGLEA SKIN PROTEIN AMINO-ACID
ORGN Classifier
Cnidaria 41000
Super Taxa
Invertebrata; Animalia
Taxa Notes
Animals, Invertebrates

L32 ANSWER 39 OF 41 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 16
ACCESSION NUMBER: 1975:99184 BIOSIS
DOCUMENT NUMBER: PREV197511099184; BR11:99184
TITLE: THERMAL TRANSITIONS IN **COLLAGEN** AND THE PREFERRED TEMPERATURE RANGE OF ANIMALS.
AUTHOR(S): RIGBY B J; ROBINSON M S
SOURCE: Nature (London), (1975) Vol. 253, No. 5489, pp. 277-279. CODEN: NATUAS. ISSN: 0028-0836.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable
CC Mathematical biology and statistical methods 04500
Behavioral biology - Animal behavior 07003
Ecology: environmental biology - Water research and fishery biology 07517
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Molecular properties and macromolecules 10506
External effects - Temperature as a primary variable 10614
External effects - Temperature as a primary variable - cold 10616
Movement 12100
Metabolism - Proteins, peptides and amino acids 13012
Bones, joints, fasciae, connective and adipose tissue - General and methods 18001
Bones, joints, fasciae, connective and adipose tissue - Physiology and

biochemistry 18004
Temperature - General measurement and methods 23001
Temperature - Hypothermia and hyperthermia 23006
Invertebrata: comparative, experimental morphology, physiology and pathology - General 64001
Invertebrata: comparative, experimental morphology, physiology and pathology - Cnidaria 64008
Invertebrata: comparative, experimental morphology, physiology and pathology - Annelida 64030

IT Major Concepts
Behavior; Biochemistry and Molecular Biophysics; Metabolism; Methods and Techniques; Physiology; Skeletal System (Movement and Support)

IT Miscellaneous Descriptors
NOTE EARTHWORM ALLOLOBOPHORA-CALIGINOSA EISENIA-FOETIDA AURELIA-COERULEA **JELLYFISH** COOLING RELAXATION TEMPERATURE CURVE

ORGN Classifier
Cnidaria 41000
Super Taxa
Invertebrata; Animalia
Taxa Notes
Animals, Invertebrates

ORGN Classifier
Oligochaeta 65400
Super Taxa
Annelida; Invertebrata; Animalia
Taxa Notes
Animals, Annelids, Invertebrates

L32 ANSWER 40 OF 41 MEDLINE on STN DUPLICATE 17
ACCESSION NUMBER: 73154900 MEDLINE
DOCUMENT NUMBER: 73154900 PubMed ID: 4144516
TITLE: Thermal properties of the **collagen** of **jellyfish** (Aurella coerulea) and their relation to its thermal behaviour.
AUTHOR: Rigby R J; Hafey M
SOURCE: AUSTRALIAN JOURNAL OF BIOLOGICAL SCIENCES, (1972 Dec) 25 (6) 1361-3.
Journal code: 0370613. ISSN: 0004-9417.
PUB. COUNTRY: Australia
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197306
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19950206
Entered Medline: 19730608

CT Check Tags: Animal
Amino Acids: AN, analysis
Cnidaria: AN, analysis
*Cnidaria: PH, physiology
Collagen: AN, analysis
***Collagen: PH, physiology**
Movement
*Temperature
RN **9007-34-5 (Collagen)**
CN 0 (Amino Acids)

L32 ANSWER 41 OF 41 OCEAN COPYRIGHT 2004 CSA on STN
ACCESSION NUMBER: 70:3103 OCEAN
DOCUMENT NUMBER: 70-07743
TITLE: THE AMINO ACID CONTENT OF SEA NETTLE (CHRYSAORA QUINQUECIRRHA) NEMATOCYSTS.
AUTHOR: GOLDNER, RONALD
CORPORATE SOURCE: UNKNOWN
SOURCE: COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY, 33(3) :707-710, APRIL 1, 1970., (1970) .
FILE SEGMENT: DCOA
LANGUAGE: English